Bid Documents - December 17, 2012
VA Project No. 539-13-101
Upgrade Elevators, Pneumatic Tubes, and Dumbwaiter

Department of Veterans Affairs Medical Center
3200 Vine St.
Cincinnati, Ohio 45220

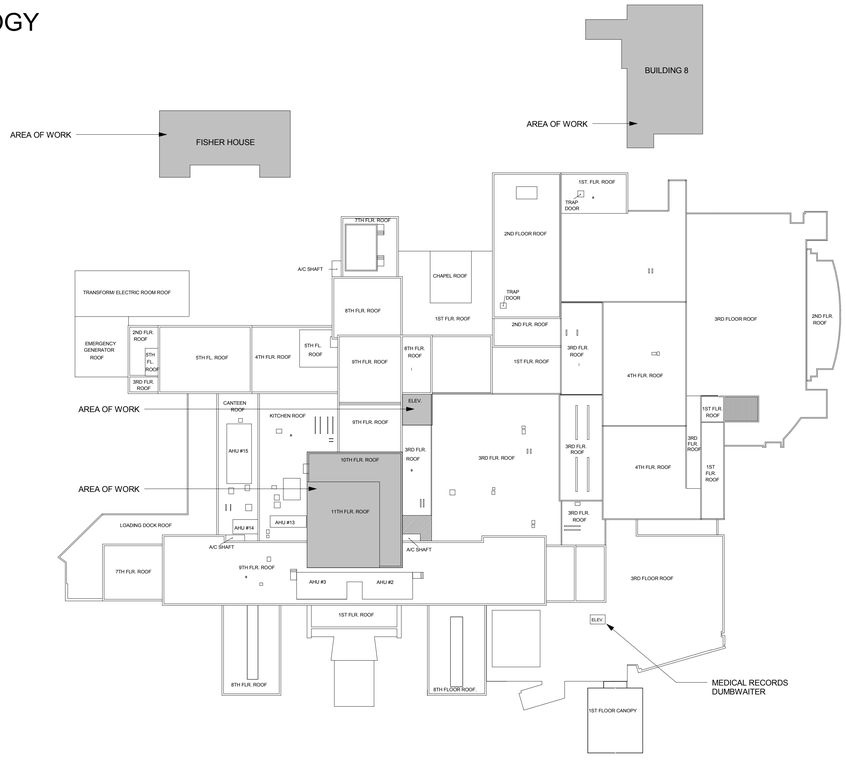
JOHN POE ARCHITECTS
ARCHITECTURE PLANNING INTERIOR DESIGN
116 EAST THIRD STREET
DAYTON, OHIO 45402
937.461.3290 P
937.461.0260 F

HEAPY ENGINEERING
MECHANICAL ELECTRICAL COMMISSIONING TECHNOLOGY
1400 WEST DOROTHY LANE
DAYTON, OH 45409
937.224.0861 P
937.224.5777 F

GENERAL CONSTRUCTION NOTES

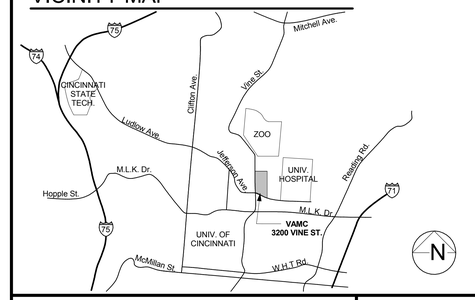
* PLEASE NOTE THAT THE TERM PROJECT ENGINEER REFERS TO THE CONTRACTING OFFICER'S TECHNICAL REPRESENTATIVE.

1. ALL WORK SHALL COMPLY WITH THE LATEST NFPA 101 LIFE SAFETY CODE, INTERNATIONAL BUILDING CODE, AND OTHER COES AS IDENTIFIED IN VHA PROGRAM GUIDE PG-18-3, TOPIC 01, CODES, STANDARDS AND EXECUTIVE ORDERS WHICH CAN BE FOUND ON THE DEPARTMENT OF VETERAN AFFAIRS, TECHNICAL INFORMATION LIBRRARY WEBSITE.
2. ALL WORK SHALL COMPLY WITH REQUIREMENTS OF THE LATEST ARCHITECTURAL BARRIERS ACT ACCESSIBILITY STANDARD (ABAAS) AND DEPARTMENT OF VETERANS AFFAIRS BARRIER FREE DESIGN GUIDE PG-18-13 WHICH CAN BE FOUND ON THE DEPARTMENT OF VETERANS AFFAIRS TECHNICAL INFORMATION LIBRARY WEBSITE.
3. CONTRACTOR IS RESPONSIBLE TO VISIT THE SITE, EXAMINE AND ACCEPT EXISTING CONDITIONS PRIOR TO BIDDING. SITE VISITS TO BE COORDINATED WITH THE CONTRACTING OFFICER'S REPRESENTATIVE.
4. CONTRACTOR IS RESPONSIBLE TO REPAIR AND/OR REFINISH, TO MATCH ADJACENT EXISTING SURFACES, ANY EXISTING MATERIALS TO REMAIN THAT ARE DAMAGED DURING THE COURSE OF DEMOLITION OR NEW WORK.
5. WHERE REMOVAL OF EXISTING WORK IS REQUIRED FOR INSTALLATION OF NEW WORK, CONTRACTOR SHALL REPAIR EXISTING CONSTRUCTION TO REMAIN OR PROVIDE NEW CONSTRUCTION TO MATCH EXISTING ADJACENT SURFACES TO REMAIN.
6. CONTRACTOR IS RESPONSIBLE TO FIELD VERIFY ALL CONDITIONS AND DIMENSIONS PRIOR TO ORDERING, FABRICATING OR INSTALLING NEW MATERIALS.
7. CONTRACTOR IS RESPONSIBLE TO VERIFY SIZES OF ALL EQUIPMENT, ETC. TO BE INSTALLED AS PART OF THIS PROJECT, AND WHERE NECESSARY, MAKE SPECIAL PROVISIONS TO INSTALL EQUIPMENT THAT IS TOO LARGE TO FIT THROUGH FINISHED OPENINGS.
8. CONTRACTOR SHALL PROVIDE WOOD BLOCKING AT TOILET ACCESSORIES, HAND RAILS, BUMPER RAILS, SHELVING, CASEWORK, MOUNTING BRACKETS AND OTHER WALL MOUNTED ITEMS, AS INDICATED IN THE CONTRACT DOCUMENTS AND AS RECOMMENDED BY PRODUCT MANUFACTURERS. ALL WOOD BLOCKING SHALL BE FIRE RETARDANT TREATED.
9. ALL EXPOSED NEW WORK IS TO RECEIVE NEW FINISHES UNLESS SPECIFICALLY NOTED OTHERWISE. IF NO FINISH IS INDICATED AT A PARTICULAR SURFACE, CONTRACTOR SHALL PROVIDE FINISH(S) AS INDICATED AT SIMILAR CONDITIONS.
10. CONTRACTOR SHALL PROVIDE COMPLETE AND FULLY OPERATIONAL SYSTEMS WHICH COMPLY WITH STATED CODES AND REGULATIONS. WHERE THE OMISSION OF A PART OR ELEMENT OF A SYSTEM WOULD RESULT IN THE NON-OPERATION, OR INCORRECT OPERATION OF A SYSTEM, CONTRACTOR SHALL INCLUDE SAID PART OR ELEMENT AS PART OF THE WORK.
11. ALL PENETRATIONS THROUGH NEW AND/OR EXISTING SMOKE OR FIRE RATED WALLS OR FLOORS SHALL BE SMOKE/FIRE STOPPED AS REQUIRED BY THE RATING OF THE WALL OR FLOOR. ALL FLOORS IN BUILDING 1 ARE 2 HOUR RATED ASSEMBLIES.SEE PLAN FOR VARIOUS WALL RATINGS.
12. FIRE PROTECTION CONTRACTOR'S SPRINKLER DESIGN WILL BE SUBJECT TO AN INDEPENDENT REVIEW BY A CERTIFIED FIRE PROTECTION ENGINEER RETAINED BY THE OWNER. THE FIRE PROTECTION CONTRACTOR IS RESPONSIBLE FOR MAKING ANY REQUIRED CHANGES TO THE DESIGN AS IDENTIFIED BY THE OWNER'S FIRE PROTECTION ENGINEER AS NECESSARY FOR COMPLIANCE WITH SPECIFIED NFPA REQUIREMENTS.



Campus Map
Scale: N.T.S.

VICINITY MAP



DRAWING INDEX

GRAPHIC SYMBOLS

ELEVATION
SECTION/DETAIL NUMBER
DRAWING NUMBER
NOTE
BEARING
REVISION
CEILING HEIGHT/ FINISH DESIGNATION
COLUMN GRID
ROOM NUMBER
WINDOW OPENING
DOOR OPENING

Upgrade Elevators, Pneumatic Tubes, and Dumbwaiter
FOR: Department of Veterans Affairs Medical Center
3200 Vine St.
Cincinnati, Ohio 45220

PRINTING

REVISIONS

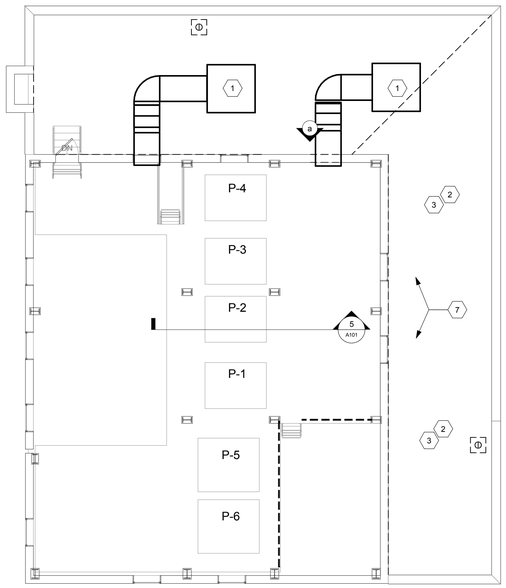
STATE OF OHIO JOHN A. POE 6549 REGISTERED ARCHITECT

SET NO.

VA PROJECT NO. 539-13-101
JPA PROJECT NO. 12008.00

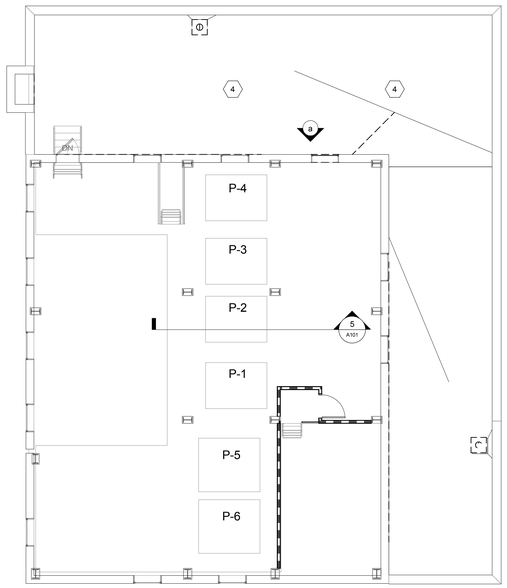
DATE December 17, 2012

G001



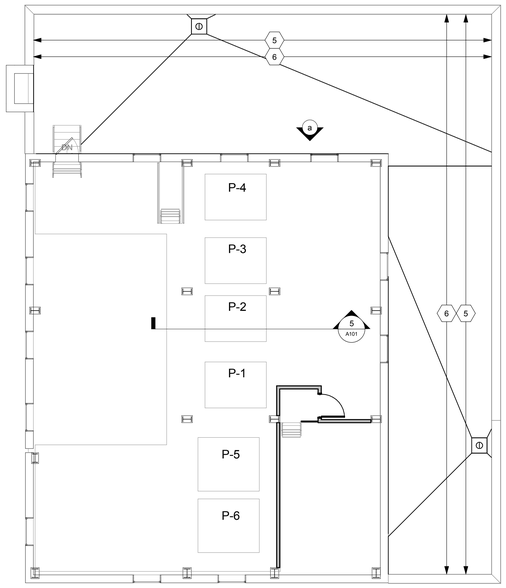
N 1 Eleventh Floor - Phase 1

Scale: 1/8" = 1'-0"



N 2 Eleventh Floor - Phase 2

Scale: 1/8" = 1'-0"



N 3 Eleventh Floor - Phase 3

Scale: 1/8" = 1'-0"

GENERAL DEMOLITION NOTES

A. Remove all existing partitions shown with dashed line. Repair wall and floor finishes to match adjacent surfaces at areas of removal or scheduled new surfaces as required.
B. Remove all existing borrowed lights, doors and hollow metal frames where indicated with dashed line. Unused hardware shall be turned over to Owner. Box hardware before giving to Owner.
D. See Plumbing, HVAC and Electrical Drawings for removal work associated with those trades.
E. Computer and communication cables and/or other wiring, piping, tubing, etc. serving other areas and functions located above ceiling or in walls of area to be remodeled shall be maintained during demolition/construction process. Coordinate any required changes to these systems with the Project Engineer.
F. Repair existing walls to match adjacent undisturbed wall where cabinets, countertops, etc. are shown to be removed.
G. Prepare walls and floor slabs as required to receive new fininsh materials where existing finish is indicated to be removed.
H. An asbestos survey, dated November 26, 2012 has been included in the construction documents. ACM was identified on areas of work. Abatement specification has been provided.
J. If material not listed in the asbestos survey has been uncovered during the performance of this work that is suspected to be asbestos containing, stop work in that area and contact the Project Engineer.

GENERAL PHASING NOTES

A. For temporay partition locations see Demolition Plans. Temporary partitions are suggested locations.Coordinate final location in field with Project Engineer.
B. Verify all conditions in the field prior to fabrication, erection and construction.
C. All asbestos containing material (ACM) must be abated per the direction of the Project Engineer and project specification 017419 and local state and federal regulations. Abatement if required is to be scheduled in appropriate sequence with demolition, new construction and project phasing.
D. Coordinate phase completion and start-up with requirements as set forth by the Project Engineer to maintain daily operations to near as normal as possible.
E. Coordinate location of job dumpster with the Project Engineer so as to disrupt daily operations as little as possible.
F. Coordinate access to all phases of construction, deliveries, and debris removal with the Project Engineer. See General Requirements.
G. Temporary door locations and sizes are as required by the General Contractor. Doors will interfere with daily operations as little as possible. Confirm all locations with the Project Engineer.
H. Existing HVAC, medical gases, sprinklers and water supply to be maintained throughout as required during each phase of construction.Coordinate phasing with Mechanical and Plumbing contractor. Support and protect all lines during each phase of construction. See MEPDrawings.
J. Provide and maintain negative air pressure at all construction. Coordinate with HVAC contractor. See HVAC plans for temporary venting requirements and duct locations.
K. Temporary partition to structural deck above. See A601 for temporary partition type.
L. Existing power must be maintained throughout as required during each phase of construction.Coordinate phasing with Electrical Contractor. Coordinate power turnover with requirements as dictated by the Project Engineer. See Electrical Drawings.
M. Coordinate sequence construction with Project Engineer so that only one side of any corridor in use is obstructed at any one time.
N. Coordinate all work involving the generation of excessive noise so as to occur during non-peak operating hours, 1000 to 1600 daily. Activities to occur during this time include, but are not limited to saw cutting, jack hammering, hammer drilling and core drilling. If there is any question as to whether an operation should occur during this time the Contractor will contact the Project Engineer.
P. Only one elevator at a time to be out of service. Coordinate which elevator and sequencing of work with Owner.

PLAN NOTES

1 Unit to stay in service during Phase 1.
2 Remove unit during Phase 1.
3 Install new unit during Phase 1.
4 Remove unit during Phase 2.
5 Remove existing cold applied built up roofing system.
6 Install cold applied built up roofing system.
7 Provide temporary cooling during this Phase.

FULLY SPRINKLERED

Revisions	Date

CONSULTANTS:

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ARCHITECT/ENGINEERS:
JOHN POE ARCHITECTS
116 EAST THIRD STREET
DAYTON, OHIO 45402-2130
937 461 3290 PHONE
937 461 0260 FAX
jpa@johnpoe.com

Drawing Title: Phasing Plans

Approved: Project Director

Project Title: Upgrade Elevators, Pneumatic Tubes, and Dumbwaiter

Location: Cincinnati, Ohio

Project No.
VA Project No. 539-13-101
JPA Project No. 12008.00

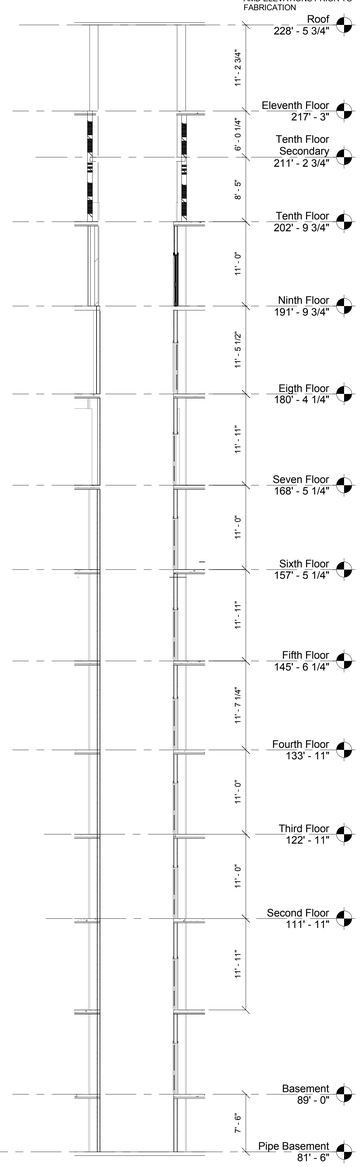
Building Number: 1, 8 ,15

Drawing Number: G002

Dwg. of

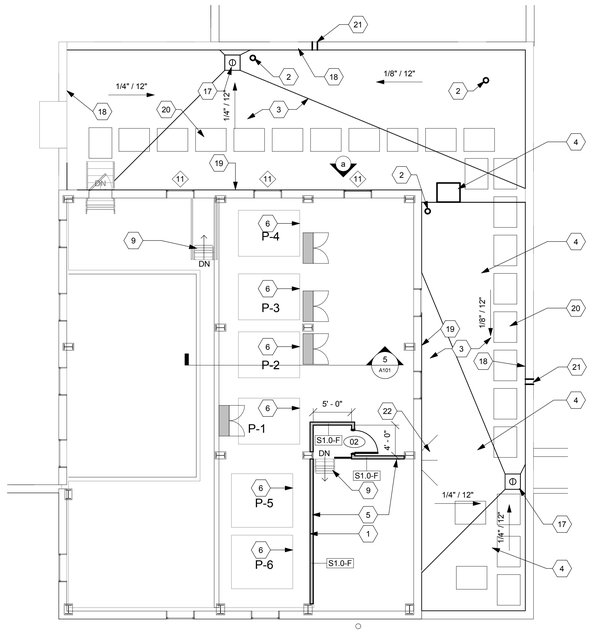
Date: December 17, 2012
Checked: KR
Drawn: BC

Office of Construction and Facilities Management
Department of Veterans Affairs



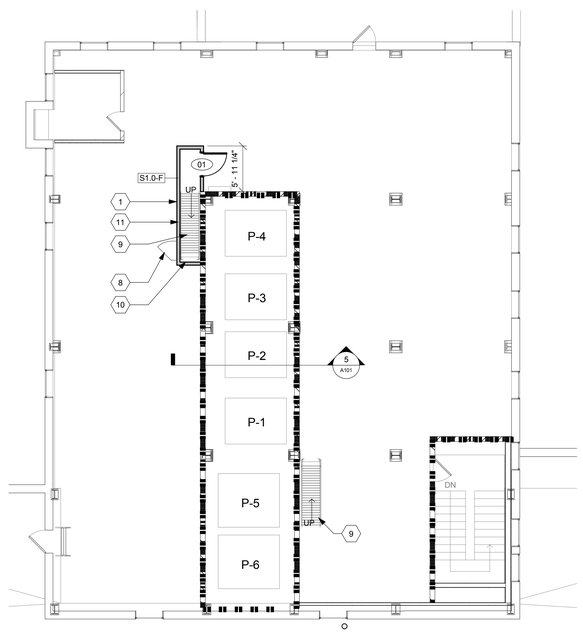
5 Typical Elevator Section - Building 1

Scale: 1/8" = 1'-0"



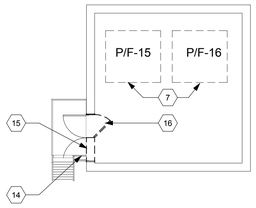
N 2 Eleventh Floor - Machine Room

Scale: 1/8" = 1'-0"



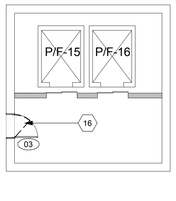
N 1 Tenth Floor

Scale: 1/8" = 1'-0"



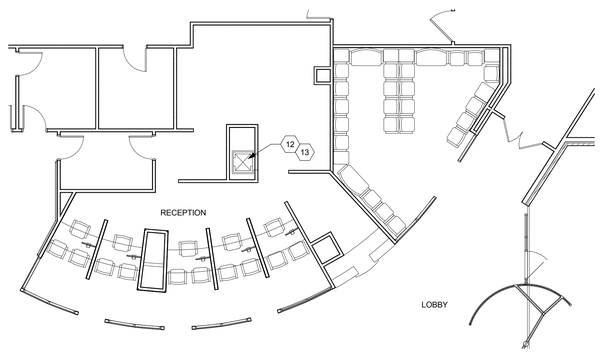
N 4 Eleventh Floor - Machine Room

Scale: 1/8" = 1'-0"



N 3 Tenth Floor

Scale: 1/8" = 1'-0"



N 6 Partial First Floor Plan - Dumbwaiter

Scale: 1/8" = 1'-0"

DEDUCT ALTERNATE 1

GENERAL DEMOLITION NOTES

A. Remove all existing partitions shown with dashed line. Repair wall and floor finishes to match adjacent surfaces at areas of removal or scheduled new surfaces as required.
B. Remove all existing borrowed lights, doors and hollow metal frames where indicated with dashed line. Unused hardware shall be turned over to Owner. Box hardware before giving to Owner.
D. See Plumbing, HVAC and Electrical Drawings for removal work associated with those trades.
E. Computer and communication cables and/or other wiring, piping, tubing, etc. serving other areas and functions located above ceiling or in walls of area to be remodeled shall be maintained during demolition/construction process. Coordinate any required changes to these systems with the Project Engineer.
F. Repair existing walls to match adjacent undisturbed wall where cabinets, countertops, etc. are shown to be removed.
G. Prepare walls and floor slabs as required to receive new fininsh materials where existing finish is indicated to be removed.
H. An asbestos survey, dated November 26, 2012 has been included in the construction documents. ACM was identified on areas of work. Abatement specification has been provided.
J. If material not listed in the asbestos survey has been uncovered during the performance of this work that is suspected to be asbestos containing, stop work in that area and contact the Project Engineer.

LEGEND

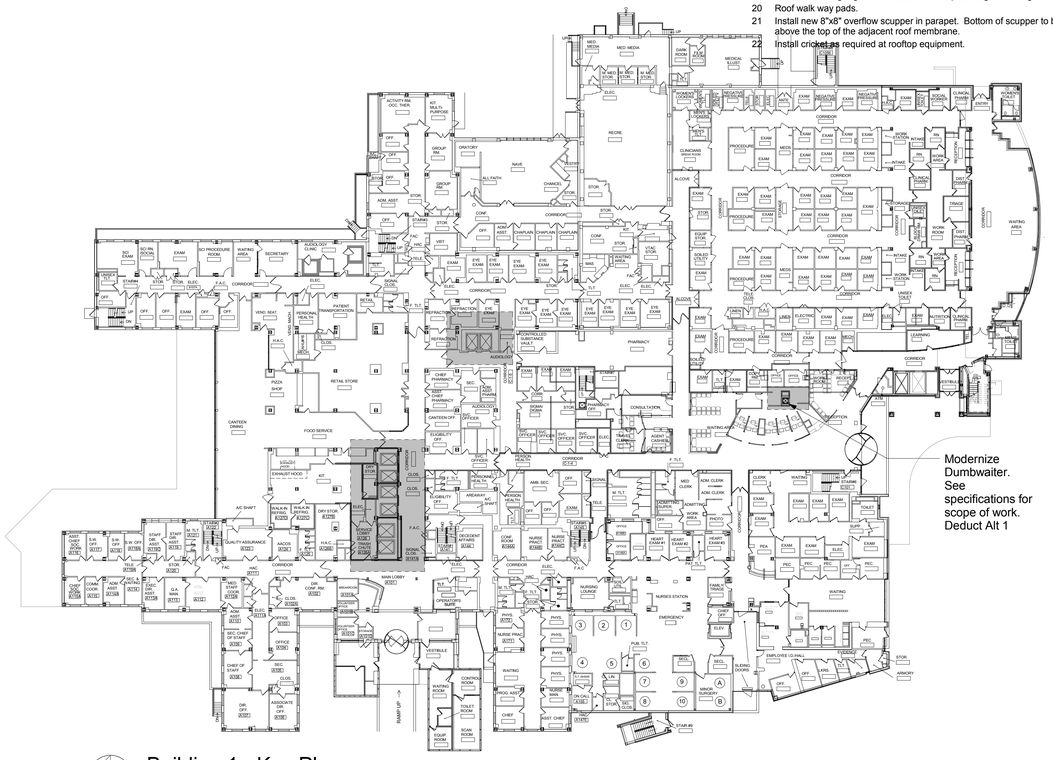
- 0-HR Smoke Partition - OBC 710
- 1-HR Smoke Barrier - OBC 709
- 1-HR Fire Barrier - OBC 706
- 2-HR Fire Barrier - OBC 706
- Means of Egress
- Existing Wall to Remain
- New Wall
- 1/8"/12" Minimum Roof Slope.

GENERAL NOTES

A. All dimensions are taken to face of gypsum wallboard or unit masonry.
B. Edge of all door jambs at hinge side not otherwise indicated are to be 6" from the face of intersecting walls. Edge of all door jambs at strike side not otherwise located are to be 18" minimum from the face of intersecting walls.
C. All wood blocking to be fire retardent treated.
D. Repair all distubed walls to match existing conditions and maintain fire rated assemblies.
E. See Mechanical, Electrical, and Plumbing drawings for removals of roof top equipment.
F. See sheet A602 for typical roof details.

PLAN NOTES

1 New 3-5/8" metal stud wall with 5/8" gypsum board both sides from floor to deck above. See sheet A601 for details. Remove existing steel guard rail.
2 Extend existing soil stack/vent riser as required for top to be 12" above the adjacent roof surface. See typical roof details.
3 Remove exisitng roofing system down to the existing concrete deck. Refer to the asbestos roof flashing abatement spcification for flashing abatement. Install new cold applied roofing system consisting of cold process vapor retarder, insulation, recovery board, 3 ply cold process roofing membrane, with flood coat and aggregate surfacing and all related flashings. See typical roof details.
4 See Mechanical Drawings for new roof top units and ductwork.
5 Align face of wall with existing slab edge.
6 Remove and dispose of existing elevator motor, transformer and controllers. Install new elevator equipment See specifications for full scope of demolition and new work. Typical for 6 elevators. Only one elevator at a time to be out of service. Coordinate elevator and sequencing of work with Owner.
7 Replace elevator motor and controller for two elevators. See specifications for complete scope. Only one elevator at a time to be out of service. Coordinate elevator and sequencing of work with Owner.
8 48" high x 30" wide stainless steel access panel. Panel shall be 1 HR rated assembly. Mount bottom of panel 8" above finish floor.
9 Existing steel ladder.
10 Align inside face of wall with edge of slab above.
11 Hold inside face of wall tight to existing stair, to minimize interference with existing adjacent piping.
12 Existing dumbwaiter and associated components to be removed. Modernize per specifications.
13 Install new dumbwaiter. See specifications for scope of work.
14 Remove and reinstall existing railing as required to remove existing elevator machines and install new equipment.
15 Remove section of brick wall to accomodate new door and frame. Tooth in bricks at exposed edges. Provide new lintel as required for new opening.
16 Remove existing hollow metal door and frame.
17 Remove existing roof drain and all extraneous piping back to point of new connection, and connect new roof drain to existing storm piping. See typical roof details.
18 Remove existing bib flashing and install new bib flashing full length of parapet.
19 Remove existing reglet and install new one peice reglet full length of wall.
19 Remove existing reglet and install new one piece reglet full length of wall.
20 Roof walk way pads.
21 Install new 8"x8" overflow scupper in parapet. Bottom of scupper to be 1" above the top of the adjacent roof membrane.
22 Install cricket as required at rooftop equipment.



N Building 1 - Key Plan

Scale: N.T.S.

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Revisions	Date

CONSULTANTS:

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ARCHITECT/ENGINEERS:
JOHN POE ARCHITECTS
116 EAST THIRD STREET
DAYTON, OHIO 45402-2130
937 461 3290 PHONE
937 461 0260 FAX
jpa@johnpoe.com

Drawing Title: Bldg. 1 Elevator Plans

Approved: Project Director

Project Title: Upgrade Elevators, Pneumatic Tubes, and Dumbwaiter

Location: Cincinnati, Ohio

Date: December 17, 2012 | Checked: KR | Drawn: BC

Project No. VA Project No. 539-13-101 JPA Project No. 12008.00

Building Number: 1, 8 ,15

Drawing Number: A101

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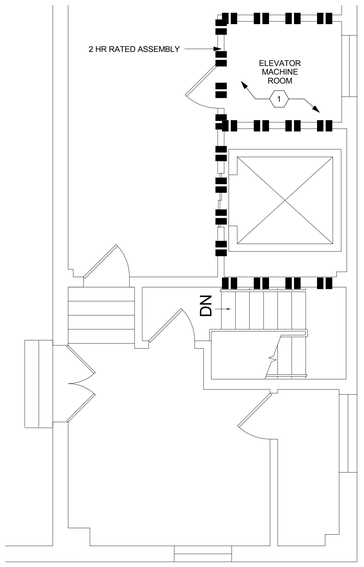
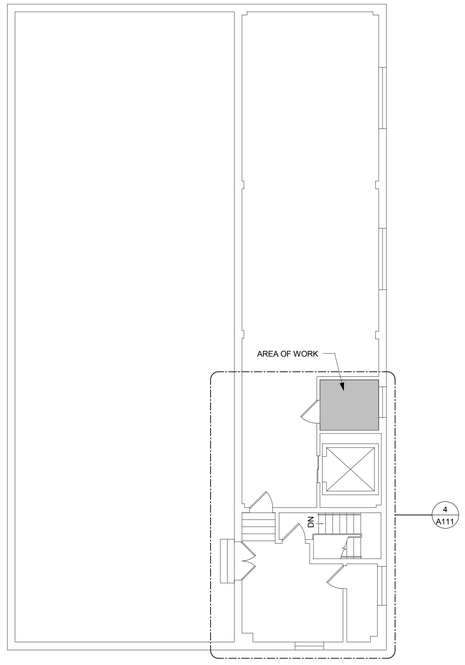
Office of Construction and Facilities Management

Department of Veterans Affairs



N 4 **Partial Plan - Building 8 - 4th Floor**

Scale: 1/4" = 1'-0" DEDUCT ALTERNATE 1



N 3 **Building 8 - 4th Floor**

Scale: 1/8" = 1'-0" DEDUCT ALTERNATE 1

GENERAL DEMOLITION NOTES

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D. See Plumbing, HVAC and Electrical Drawings for removal work associated with those trades.
E. Computer and communication cables and/or other wiring, piping, tubing, etc. serving other areas and functions located above ceiling or in walls of area to be remodeled shall be maintained during demolition/construction process. Coordinate any required changes to these systems with the Project Engineer.
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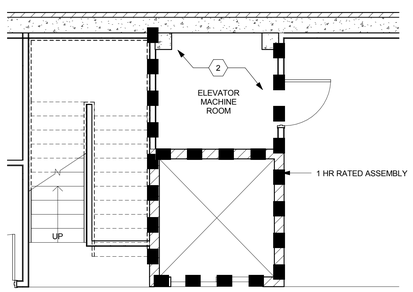
G. Prepare walls and floor slabs as required to receive new fininsh materials where existing finish is indicated to be removed.
H. An asbestos survey, dated November 26, 2012 has been included in the construction documents. ACM was identified on areas of work. Abatement specification has been provided.
J. If material not listed in the asbestos survey has been uncovered during the performance of this work that is suspected to be asbestos containing, stop work in that area and contact the Project Engineer.

GENERAL NOTES

A. All dimensions are taken to face of gypsum wallboard or unit masonry.
B. Edge of all door jambs at hinge side not otherwise indicated are to be 6" from the face of intersecting walls. Edge of all door jambs at strike side not otherwise located are to be 18" minimum from the face of intersecting walls.
C. All wood blocking to be fire retardent treated.
D. Repair all distubed walls to match existing conditions and maintain fire rated assemblies.
E. See Mechanical, Electrical, and Plumbing drawings for removals of equipment.
F. See sheet A902 for typical roof details.

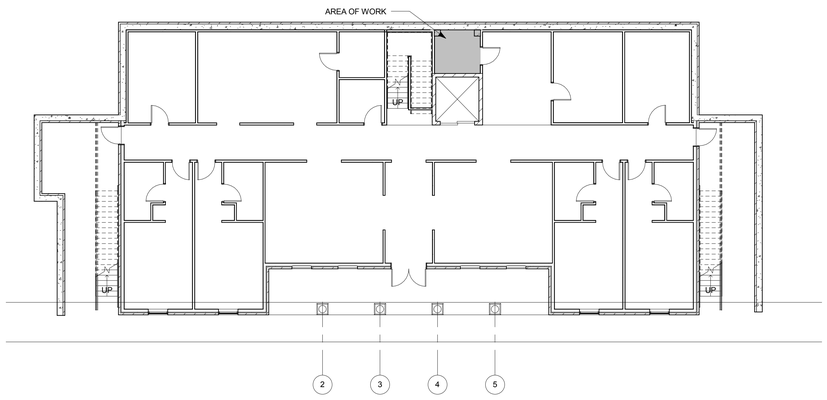
KEYNOTES

1 Provide new controller and power unit. Refer to specifications for full description of work.
2 Provide elevator controller software upgrades to make the controller non-proprietary. Refer to specifications for full description of work.



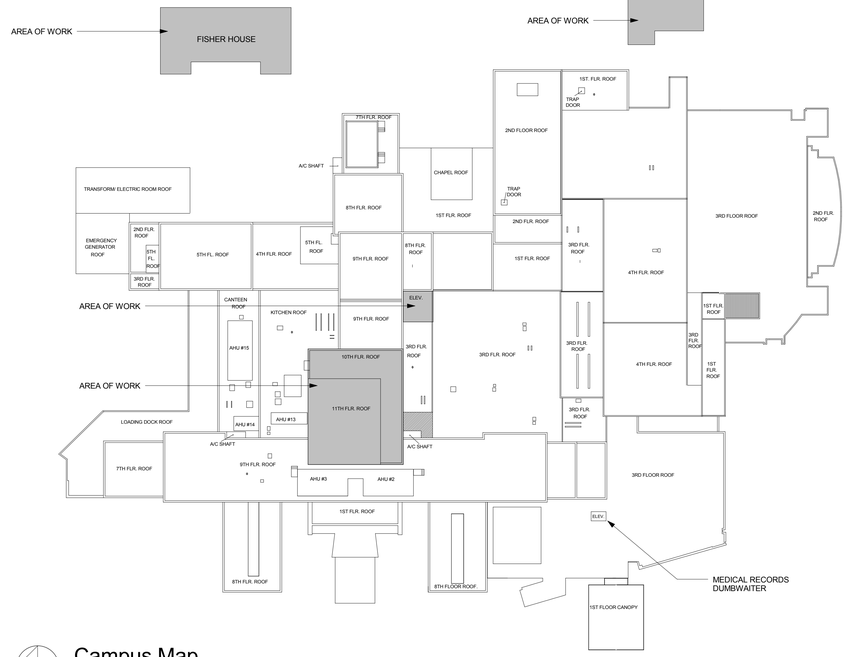
N 2 **Fisher House - Machine Room Plan**

Scale: 1/4" = 1'-0"



N 1 **Fisher House First Floor - Key Plan**

Scale: 3/32" = 1'-0"



N **Campus Map**

Scale: N.T.S.

Revisions	Date

CONSULTANTS:

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ARCHITECT/ENGINEERS:

JOHN POE ARCHITECTS
116 EAST THIRD STREET
DAYTON, OHIO 45402-2130
937 461 3290 PHONE
937 461 0260 FAX
jpa@johnpoe.com

Drawing Title: Bldg. 8 and Fisher House Elevator Plans

Approved: Project Director

Project Title: Upgrade Elevators, Pneumatic Tubes, and Dumbwaiter

Location: Cincinnati, Ohio

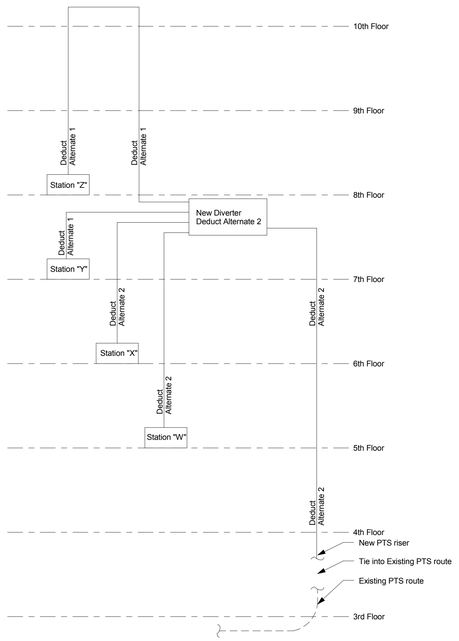
Date: December 17, 2012 | Checked: KR | Drawn: BC

Project No. 539-13-101
VA Project No. 12008.00
JPA Project No.

Building Number: 1, 8 ,15

Drawing Number: A111
Dwg. of

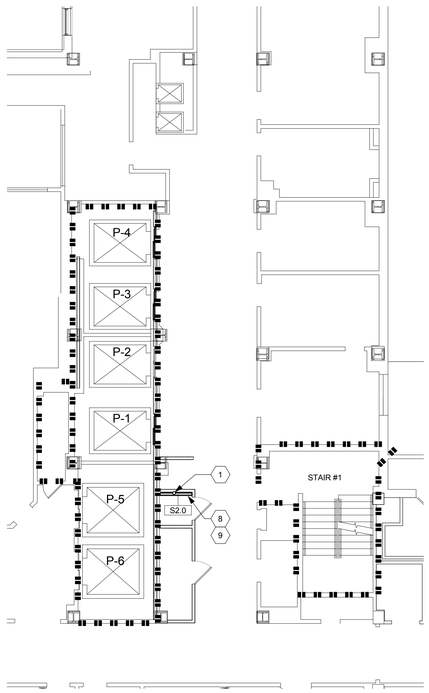
Office of Construction and Facilities Management
Department of Veterans Affairs



Pneumatic Tube Riser Diagram

Scale: N.T.S.

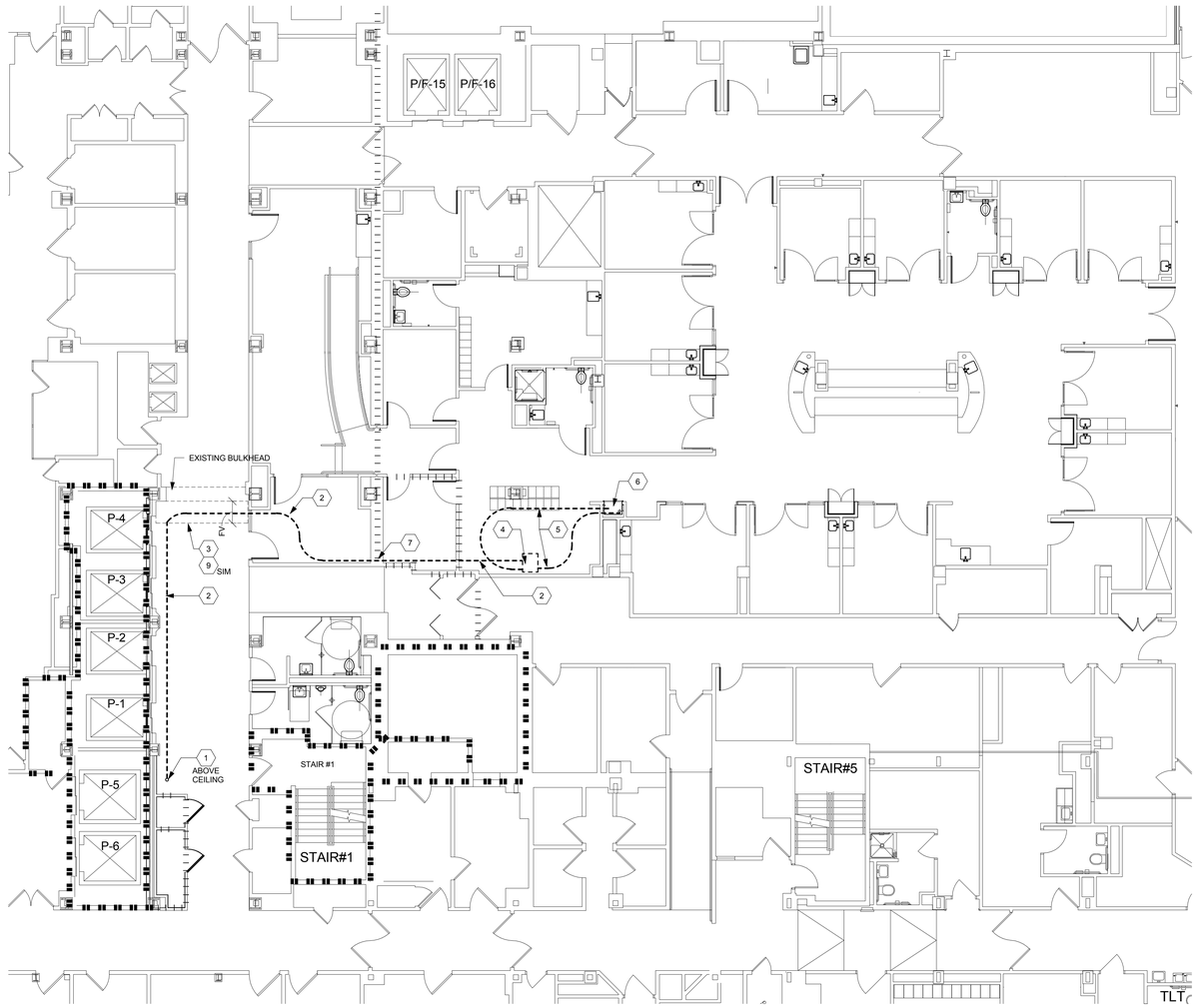
DEDUCT ALTERNATES 1 & 2



N 2 Partial Fourth Floor Plan

Scale: 1/8" = 1'-0"

DEDUCT ALTERNATE 2:
REFER TO RISER DIAGRAM
ON SHEET A121



N 1 Partial Third Floor Plan

Scale: 1/8" = 1'-0"

DEDUCT ALTERNATE 2:
REFER TO RISER DIAGRAM
ON SHEET A121

LEGEND

- 0-HR Smoke Partition - OBC 710
- 1-HR Smoke Barrier - OBC 709
- 1-HR Fire Barrier - OBC 706
- 2-HR Fire Barrier - OBC 706
- Means of Egress
- Existing Wall to Remain
- New Wall
- 1/8"/12" Minimum Roof Slope.

GENERAL DEMOLITION NOTES

A. Remove all existing partitions shown with dashed line. Repair wall and floor finishes to match adjacent surfaces at areas of removal or scheduled new surfaces as required.
B. Remove all existing borrowed lights, doors and hollow metal frames where indicated with dashed line. Unused hardware shall be turned over to Owner. Box hardware before giving to Owner.
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E. Computer and communication cables and/or other wiring, piping, tubing, etc. serving other areas and functions located above ceiling or in walls of area to be remodeled shall be maintained during demolition/construction process. Coordinate any required changes to these systems with the Project Engineer.
F. Repair existing walls to match adjacent undisturbed wall where cabinets, countertops, etc. are shown to be removed.
G. Prepare walls and floor slabs as required to receive new fininsh materials where existing finish is indicated to be removed.
H. An asbestos survey, dated November 26, 2012 has been included in the construction documents. ACM was identified on areas of work. Abatement specification has been provided.
J. If material not listed in the asbestos survey has been uncovered during the performance of this work that is suspected to be asbestos containing, stop work in that area and contact the Project Engineer.

GENERAL NOTES

A. All dimensions are taken to face of gypsum wallboard or unit masonry.
B. Edge of all door jambs at hinge side not otherwise indicated are to be 6" from the face of intersecting walls. Edge of all door jambs at strike side not otherwise located are to be 18" minimum from the face of intersecting walls.
C. All wood blocking to be fire retardent treated.
D. Repair all distubed walls to match existing conditions and maintain fire rated assemblies.
E. See Mechanical, Electrical, and Plumbing drawings for removals of roof top equipment.
F. See sheet A602 for typical roof details.

⎔ PLAN NOTES

1 New 4" pneumatic tube riser up to 7th floor
2 New pneumatic tube route.
3 New soffit to align with finish face of existing adjacent soffit. Coordinate width of new soffit in field to accomodate installation of pneumatic tube route and assembly parts. Finish and paint to match existing adjacent soffit. Repaint all existing adjcent soffit.
4 New pneumatic tube system diverter
5 Existing pneumatic tube system
6 Existing pneumatic tube station
7 Core drill and sleeve penetration for pneumatic tube. Seal penetration to match wall rating. See Detail 8/A602.
8 Remove drywall from room side of wall. Install new metal stud wall framing tight to existing to create a cavity depth to allow for the installation of the pneumatic tube riser. Finish wall to match original condition and finish.
9 Patch suspendid acoustical ceiling tile system as required at new wall construction.

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Revisions	Date

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ARCHITECT/ENGINEERS:
JOHN POE ARCHITECTS
116 EAST THIRD STREET
DAYTON, OHIO 45402-2130
937 461 3290 PHONE
937 461 0260 FAX
jpa@johnpoe.com

Drawing Title: Bldg. 1, 3rd and 4th Floor Pneumatic Tube Plan

Approved: Project Director

Project Title: Upgrade Elevators, Pneumatic Tubes, and Dumbwaiter

Location: Cincinnati, Ohio

Date: December 17, 2012 | Checked: KR | Drawn: BC

Project No.
VA Project No. 539-13-101
JPA Project No. 12008.00

Building Number: 1, 8 ,15

Drawing Number: A121

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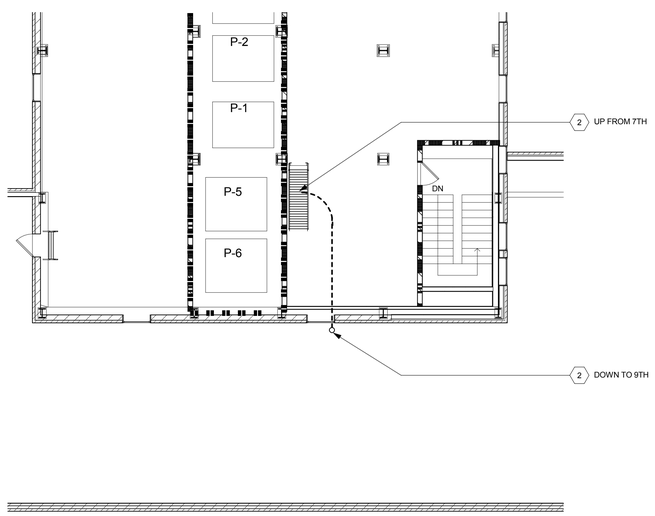
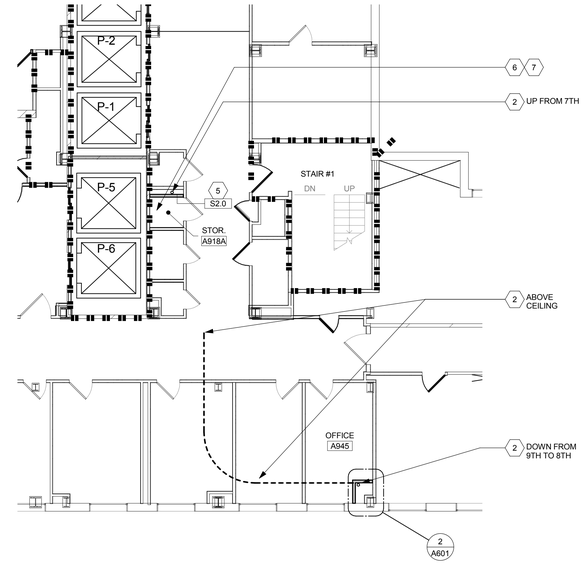
Department of Veterans Affairs



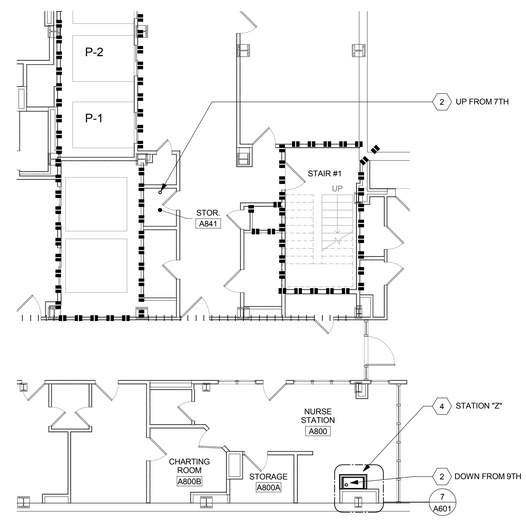
N 6 **Partial Tenth Floor Plan**
Scale: 1/8" = 1'-0"

DEDUCT ALTERNATE 1:
REFER TO RISER DIAGRAM
ON SHEET A121



N 5 **Partial Ninth Floor Plan**
Scale: 1/8" = 1'-0"

DEDUCT ALTERNATE 1:
REFER TO RISER DIAGRAM
ON SHEET A121



N 4 **Partial Eighth Floor Plan**
Scale: 1/8" = 1'-0"

DEDUCT ALTERNATE 1:
REFER TO RISER DIAGRAM
ON SHEET A121

GENERAL DEMOLITION NOTES

A. Remove all existing partitions shown with dashed line. Repair wall and floor finishes to match adjacent surfaces at areas of removal or scheduled new surfaces as required.
B. Remove all existing borrowed lights, doors and hollow metal frames where indicated with dashed line. Unused hardware shall be turned over to Owner. Box hardware before giving to Owner.
D. See Plumbing, HVAC and Electrical Drawings for removal work associated with those trades.
E. Computer and communication cables and/or other wiring, piping, tubing, etc. serving other areas and functions located above ceiling or in walls of area to be remodeled shall be maintained during demolition/construction process. Coordinate any required changes to these systems with the Project Engineer.
F. Repair existing walls to match adjacent undisturbed wall where cabinets, countertops, etc. are shown to be removed.
G. Prepare walls and floor slabs as required to receive new fininsh materials where existing finish is indicated to be removed.
H. An asbestos survey, dated November 26, 2012 has been included in the construction documents. ACM was identified on areas of work. Abatement specification has been provided.
J. If material not listed in the asbestos survey has been uncovered during the performance of this work that is suspected to be asbestos containing, stop work in that area and contact the Project Engineer.

GENERAL NOTES

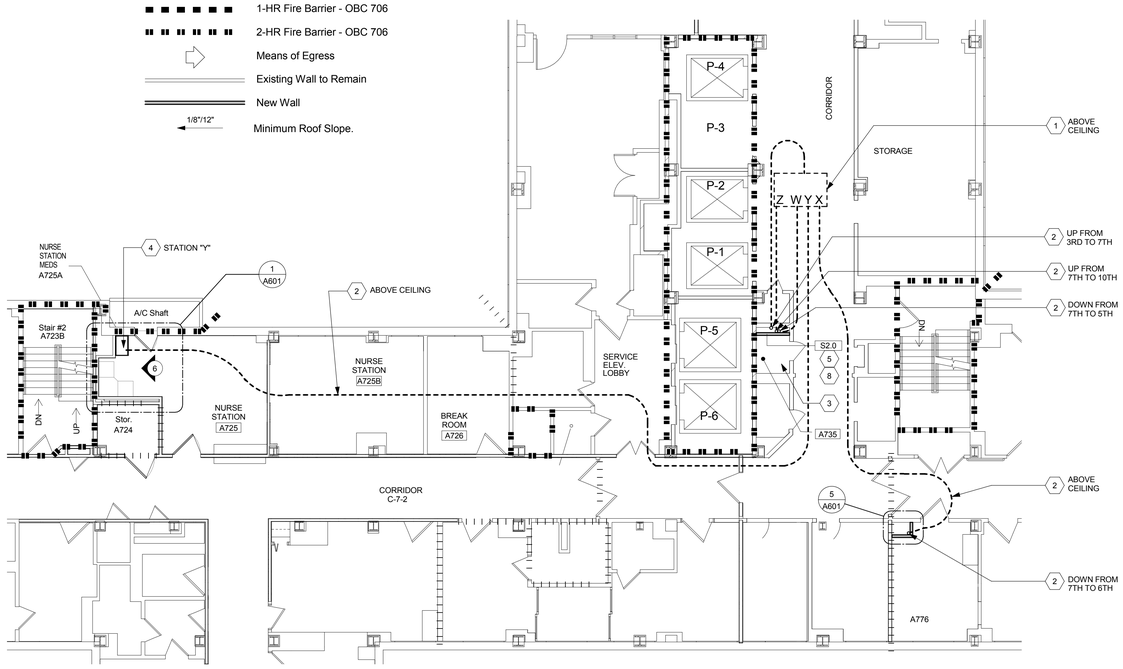
A. All dimensions are taken to face of gypsum wallboard or unit masonry.
B. Edge of all door jambs at hinge side not otherwise indicated are to be 6" from the face of intersecting walls. Edge of all door jambs at strike side not otherwise located are to be 18" minimum from the face of intersecting walls.
C. All wood blocking to be fire retardent treated.
D. Repair all distubed walls to match existing conditions and maintain fire rated assemblies.
E. See Mechanical, Electrical, and Plumbing drawings for removals of roof top equipment.
F. See sheet A602 for typical roof details.

PLAN NOTES

1 New pneumatic tube system diverter.
2 New pneumatic tube route.
3 Remove existing metal stud and gypsum board ceiling. Install new 2x2 ACT system.
4 New pneumatic tube station
5 Patch suspendid acoustical ceiling tile system as required at new wall construction.
6 See Asbestos Survey and Specifications for removals in this area.
7 Install resilient tile and base in this room. Match adjacent finishes and colors.
8 Install new metal stud wall framing tight to new pneumatic tube riser. Finish wall to match original condition and finish.

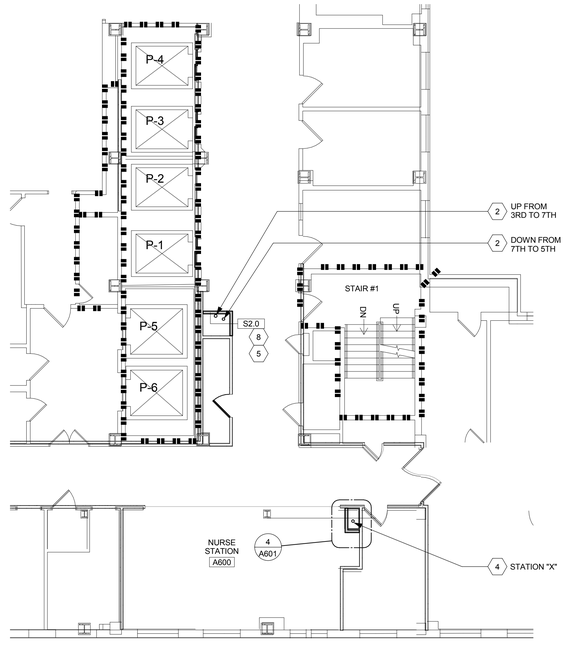
LEGEND

- 0-HR Smoke Partition - OBC 710
- 1-HR Smoke Barrier - OBC 709
- 1-HR Fire Barrier - OBC 706
- 2-HR Fire Barrier - OBC 706
- Means of Egress
- Existing Wall to Remain
- New Wall
- 1/8"/12" Minimum Roof Slope.



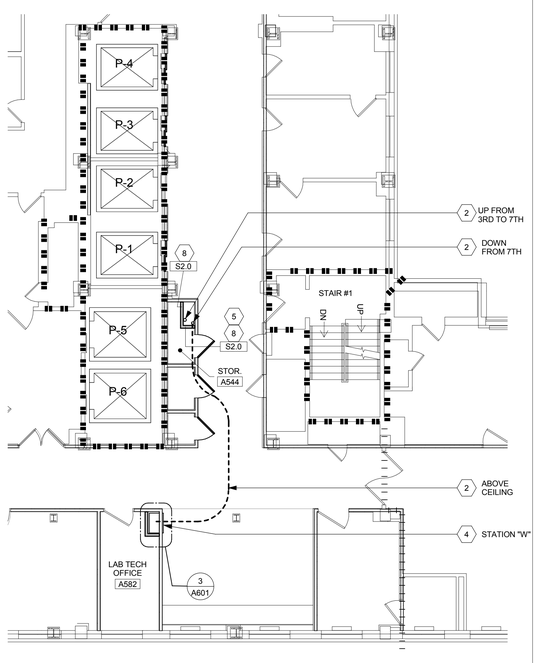
N 3 **Partial Seventh Floor Plan**
Scale: 1/8" = 1'-0"

DEDUCT ALTERNATE 1 & 2:
REFER TO RISER DIAGRAM
ON SHEET A121



N 2 **Partial Sixth Floor Plan**
Scale: 1/8" = 1'-0"

DEDUCT ALTERNATE 2:
REFER TO RISER DIAGRAM
ON SHEET A121



N 1 **Partial Fifth Floor Plan**
Scale: 1/8" = 1'-0"

DEDUCT ALTERNATE 2:
REFER TO RISER DIAGRAM
ON SHEET A121

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Revisions	Date

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JOHN POE ARCHITECTS
116 EAST THIRD STREET
DAYTON, OHIO 45402-2130
937 461 3290 PHONE
937 461 0260 FAX
jpa@johnpoe.com

Drawing Title: 5th, 6th, 7th, 8th and 9th Floor Pneumatic Tube Plans

Approved: Project Director

Project Title: Upgrade Elevators, Pneumatic Tubes, and Dumbwaiter

Location: Cincinnati, Ohio

Date: December 17, 2012 | Checked: KR | Drawn: BC

Project No.
VA Project No. 539-13-101
JPA Project No. 12008.00

Building Number: 1, 8 ,15

Drawing Number: A122

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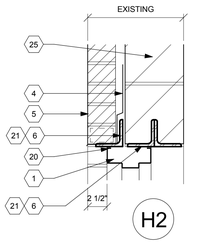
Department of Veterans Affairs



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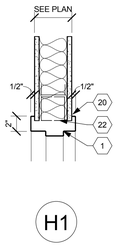

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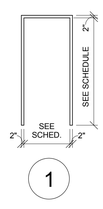
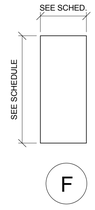


1

FRAME TYPES

Scale: 1/4" = 1'-0"



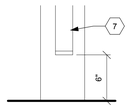
F

DOOR TYPES

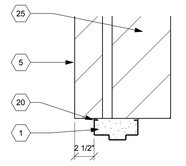
Scale: 1/4" = 1'-0"

DOOR SCHEDULE

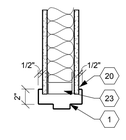
DOOR #	DOOR DESCRIPTION						FRAME DESCRIPTION				FIRE RATING	HDWE SET	REMARKS
			SIZE										
	TYPE	MAT'L	#	W	H	T	TYPE	MAT'L	HEAD	JAMB			
01	F	HM	1	3' - 0"	5' - 0"	1 3/4"	1	HM	H1	J1	1 HR.	SET 1	
02	F	HM	1	3' - 0"	5' - 0"	1 3/4"	1	HM	H1	J1	1 HR.	SET 2	
03	F	HM	1	3' - 0"	5' - 0"	1 3/4"	1	HM	H2	J2		SET 3	Field Verify Existing Opening
04	F	HM	2	3' - 0"	7' - 0"	1 3/4"	1	HM	H2	J2		SET 4	



S1



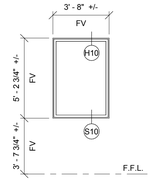
J2



J1

DOOR DETAILS

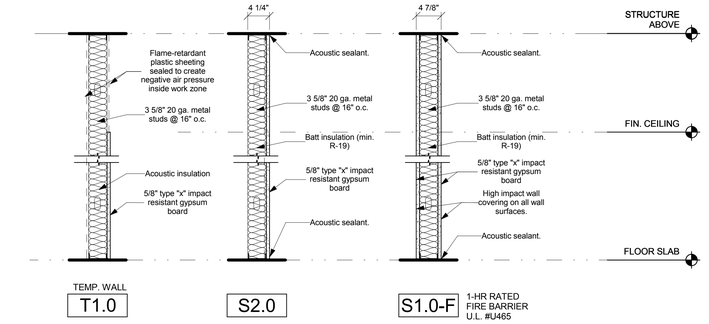
Scale: 1 1/2" = 1'-0"



11

WINDOW ELEVATION

Scale: 1/4" = 1'-0"



WALL TYPES

Scale: N.T.S.

GENERAL DEMOLITION NOTES

A. Remove all existing partitions shown with dashed line. Repair wall and floor finishes to match adjacent surfaces at areas of removal or scheduled new surfaces as required.

B. Remove all existing borrowed lights, doors and hollow metal frames where indicated with dashed line. Unused hardware shall be turned over to Owner. Box hardware before giving to Owner.

D. See Plumbing, HVAC and Electrical Drawings for removal work associated with those trades.

E. Computer and communication cables and/or other wiring, piping, tubing, etc. serving other areas and functions located above ceiling or in walls of area to be remodeled shall be maintained during demolition/construction process. Coordinate any required changes to these systems with the Project Engineer.

F. Repair existing walls to match adjacent undisturbed wall where cabinets, countertops, etc. are shown to be removed.

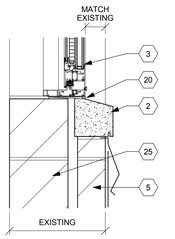
G. Prepare walls and floor slabs as required to receive new fininsh materials where existing finish is indicated to be removed.

H. An asbestos survey, dated November 26, 2012 has been included in the construction documents. ACM was identified on areas of work. Abatement specification has been provided.

J. If material not listed in the asbestos survey has been uncovered during the performance of this work that is suspected to be asbestos containing, stop work in that area and contact the Project Engineer.

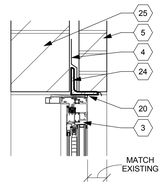
⬡ DETAIL NOTES

1 14 ga. hollow metal frame.
2 Existing sill.
3 New aluminum window.
4 Existing thru wall flashing.
5 Existing face brick.
6 Remove existing steel lintel. Install new lintel, full width of new door opening. (3) 3-1/2" x 3-1/2" x 3/8" steel angles.
7 Hospital stops @ all interior door frames.
8 Remove existing metal stud / gypsum board wall assembly. Remove wood door and frame.
9 Patch wall areas to match existing adjacent construction.
10 Remove suspendid acoustical ceiling grid assembly in room.
11 Install new suspendid acoustical ceiling grid assembly in room. Align new new gris and tiles with existing adjacent room.
12 Pneumatic Tube Station.
13 Remove vinyl plank flooring.
14 Install new vinyl plank flooring, to match existing adjacent floor. Weld new floor to existing.
15 Finish new walls to match existing adjacent walls.
16 18" deep base cabinet with plastic laminate counter top.
17 Plastic laminate countertop.
18 Patch ceiling as required for installation of new wall construction.
19 New pneumatic tube riser.
20 Continuous sealant at all sides.
21 Existing lintel to remain at Door 03 only.
22 Metal stud framing.
23 Double studs at jamb, typ.
24 Existing steel lintel.
25 Existing structure.
26 Remove vinyl wall covering on entire wall. Prep and paint wall to match VA selected color. Wall surface approx. 16'-0" wide X 9'-0" high. Field Verify exact dimensions.



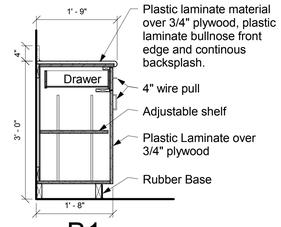
S10 Window Sill

Scale: 1 1/2" = 1'-0"



H10 Window Head

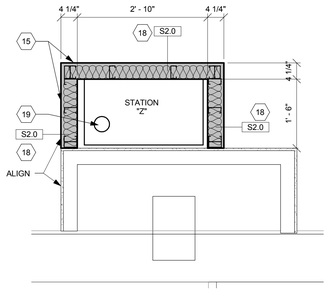
Scale: 1 1/2" = 1'-0"



B1

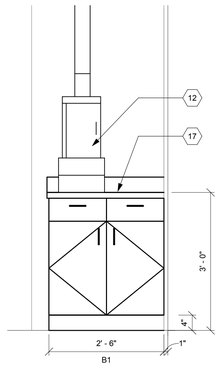
Casework Section

Scale: 3/4" = 1'-0"



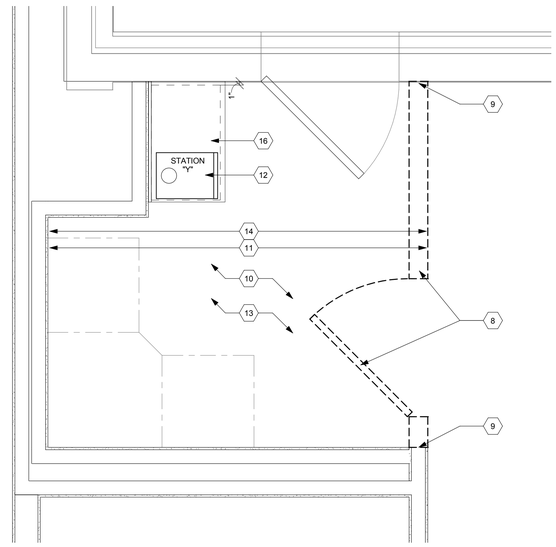
N 7 Detail 5

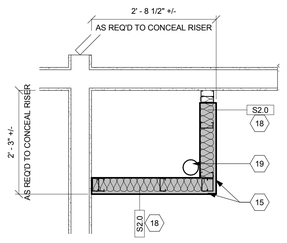
Scale: 3/4" = 1'-0"



6 Casework Elevation

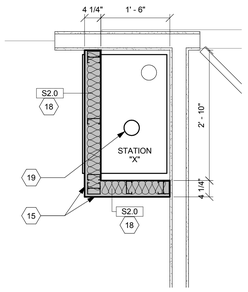
Scale: 3/4" = 1'-0"





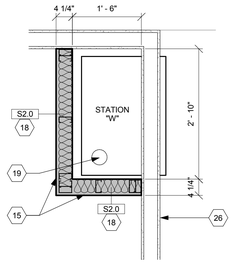
N 5 Plan Detail - 7th Floor

Scale: 3/4" = 1'-0"



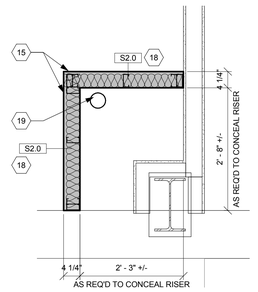
N 4 Plan Detail - 6th Floor

Scale: 3/4" = 1'-0" DEDUCT ALTERNATE 2



N 3 Plan Detail - 5th Floor

Scale: 3/4" = 1'-0" DEDUCT ALTERNATE 2



N 2 Plan Detail - 9th Floor

Scale: 3/4" = 1'-0" DEDUCT ALTERNATE 2

N 1 Plan Detail - 7th Floor

Scale: 3/4" = 1'-0"

DEDUCT ALTERNATE 2

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Revisions	Date

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ARCHITECT/ENGINEERS:

JOHN POE ARCHITECTS
116 EAST THIRD STREET
DAYTON, OHIO 45402-2130
937 461 3290 PHONE
937 461 0260 FAX
jpa@johnpoe.com

Drawing Title: Enlarged Plans and Details

Approved: Project Director

Project Title: Upgrade Elevators, Pneumatic Tubes, and Dumbwaiter

Location: Cincinnati, Ohio

Date: December 17, 2012

Checked: KR

Drawn: BC

Project No.
VA Project No. 539-13-101
JPA Project No. 12008.00

Building Number: 1, 8 ,15

Drawing Number: A601

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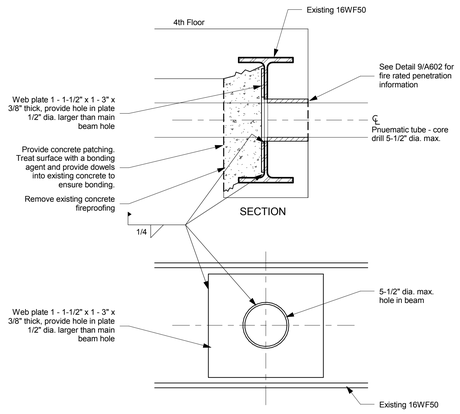
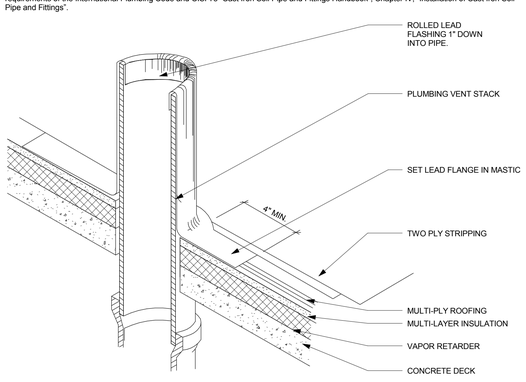


8 Beam Penetration Detail

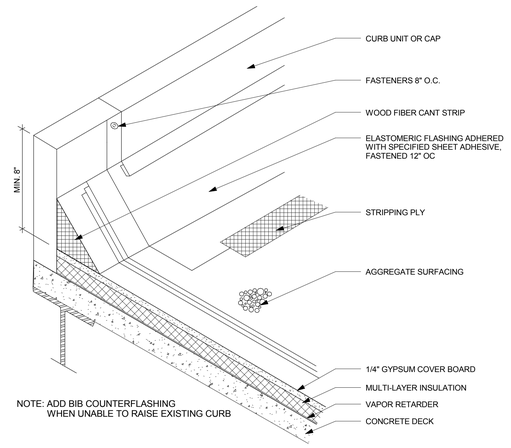
Scale: 1 1/2" = 1'-0"

Connect to and extend the existing soil stack/vent riser to a minimum of 12" above new cold applied built-up roofing. New piping shall be cast iron with bell and spigot or hubless (plain end or no-hub or hubless). The material for all pipe and fittings shall be cast iron soil pipe and fittings and shall conform to the requirements of CISPI Standard 301, ASTM A-888, or ASTM A-74. Joints for hubless pipe and fittings shall conform to the manufacturer's installation instructions. Couplings for hubless joints shall conform to CISPI 310. Joints for hub and spigot pipe shall be installed with compression gaskets conforming to the requirements of ASTM Standard C-564 or be installed with lead and oakum. A sleeve flashing device shall be provided at points where pipes pass through membrane waterproofed roofs. The sleeve flashing device shall be manufactured, cast iron fitting with clamping device that forms a sleeve for the pipe penetration of the rood membrane. The pipe installation shall comply with the requirements of the International Plumbing Code and CISPI's "Cast Iron Soil Pipe and Fittings Handbook", Chapter IV, "Installation of Cast Iron Soil Pipe and Fittings".



7 Soil Stack Flashing

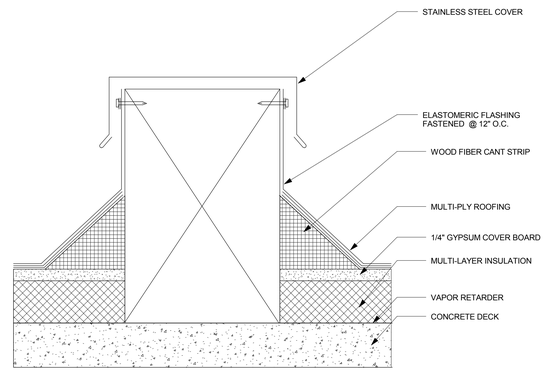
Scale: N.T.S.



NOTE: ADD BIB COUNTERFLASHING WHEN UNABLE TO RAISE EXISTING CURB

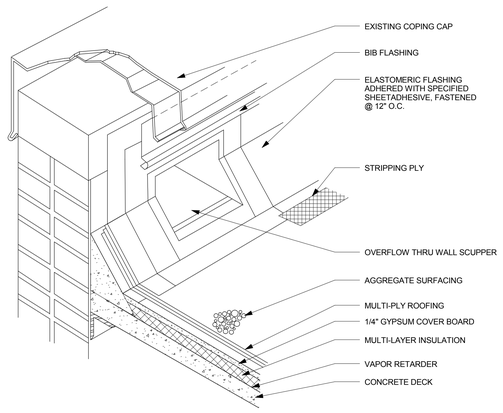
6 Curb Flashing

Scale: N.T.S.



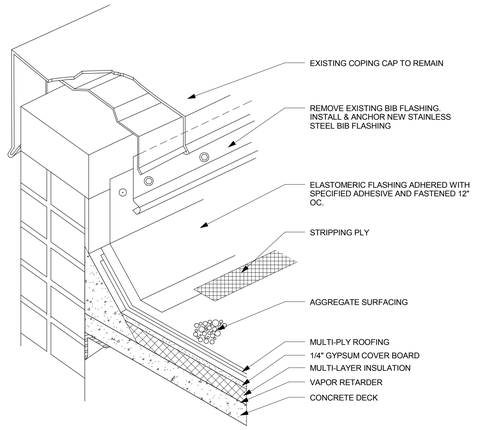
5 Rail Curb Flashing

Scale: N.T.S.



4 Thru Wall Scupper

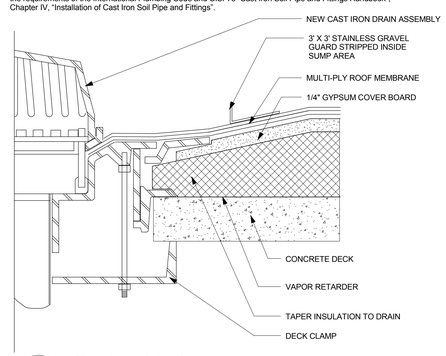
Scale: N.T.S.



3 Parapet Detail

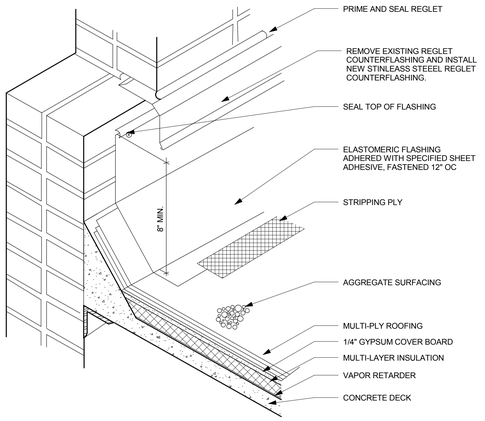
Scale: N.T.S.

Remove existing roof drain and all extraneous piping back to point of new connection, and connect new roof drain to existing storm piping. New roof drain shall have a round cast iron body with cast iron top finish, and integrally flanged not less than 12" in diameter which can be raised and lowered to meet required insulation heights with adjustable drainage collar, sump receiver, bearing pan, deck clamp for making watertight connection, and dome strainer. Free openings through strainer shall be twice area of drain outlet. An integral gravel stop shall be provided for drains installed on roofs having built up roofing covered with gravel or slag. Integral no-hub, soil pipe gasket or threaded outlet connection shall be provided. Any piping required shall be cast iron soil pipe and fittings and shall conform to the requirements of CISPI Standard 301, ASTM A-888, or ASTM A-74. Joints for hubless pipe and fittings shall conform to the manufacturer's installation instructions. Couplings for hubless joints shall conform to CISPI 310. Joints for hub and spigot pipe shall be installed with compression gaskets conforming to the requirements of ASTM Standard C-564 or be installed with lead and oakum. The pipe installation shall comply with the requirements of the International Plumbing Code and CISPI's "Cast Iron Soil Pipe and Fittings Handbook", Chapter IV, "Installation of Cast Iron Soil Pipe and Fittings".



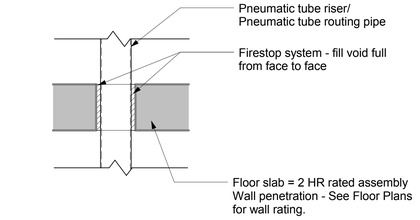
2 Drain with Sump

Scale: N.T.S.



1 One Piece Wall Flashing

Scale: N.T.S.



9 Typical Pneumatic Tube Penetration Details

Scale: 1 1/2" = 1'-0"

FULLY SPRINKLERED

Revisions	Date

CONSULTANTS:

PROGRESS PRINT
NOT FOR CONSTRUCTION
12/17/2012 11:07:33 AM
RDC/ JOHN POE ARCHITECTS

ARCHITECT/ENGINEERS:
JOHN POE ARCHITECTS
116 EAST THIRD STREET
DAYTON, OHIO 45402-2130
937 461 3290 PHONE
937 461 0260 FAX
jpa@johnpoe.com

Drawing Title: Roof & Penetration Details

Approved: Project Director

Project Title: Upgrade Elevators, Pneumatic Tubes, and Dumbwaiter

Location: Cincinnati, Ohio

Date: December 17, 2012 | Checked: Approver | Drawn: Designer

Project No.
VA Project No. 539-13-101
JPA Project No. 12008.00

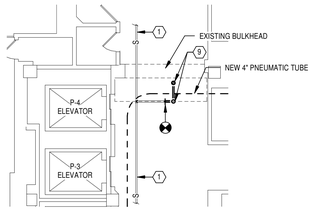
Building Number: 1, 8 ,15

Drawing Number: A602

Dwg. of

Office of Construction and Facilities Management

Department of Veterans Affairs

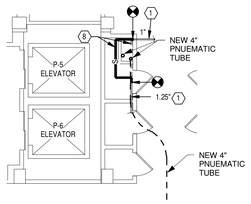


WORK DELETED UNDER ALTERNATE 2.

THIRD FLOOR PLAN

Scale: 1/8" = 1'-0"

PROJECT

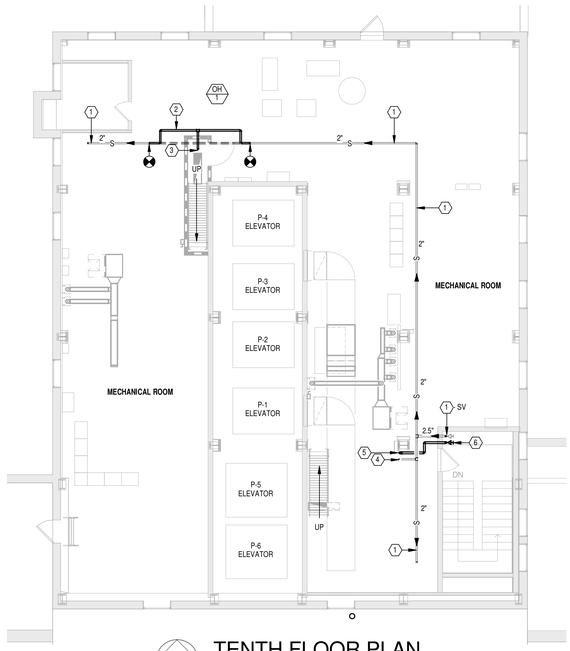


WORK DELETED UNDER ALTERNATE 2.

FIFTH FLOOR PLAN

Scale: 1/8" = 1'-0"

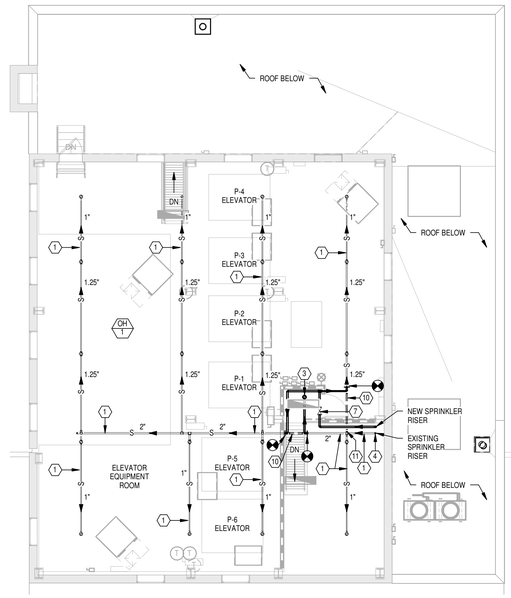
PROJECT



TENTH FLOOR PLAN

Scale: 1/8" = 1'-0"

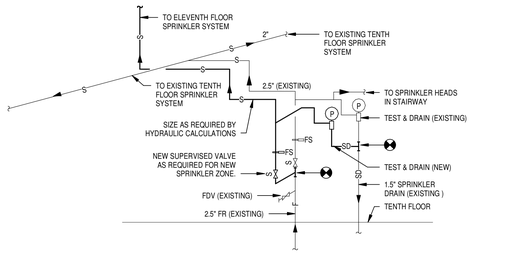
PROJECT



ELEVENTH FLOOR PLAN

Scale: 1/8" = 1'-0"

PROJECT



SUPERVISED CONTROL VALVE

Scale: N.T.S.

A 1-FX101

PLAN NOTES

1 EXISTING TO REMAIN.

2 MODIFY EXISTING FIRE SUPPRESSION SPRINKLER SYSTEM AS REQUIRED TO FACILITATE NEW RENOVATED AREA.

3 PROVIDE NEW SPRINKLER HEAD(S) AS REQUIRED.

4 REMOVE EXISTING SUPERVISED VALVE FROM SPRINKLER RISER AND REPLACE WITH SECTION OF PIPING.

5 NEW SPRINKLER RISER (SIZE AS REQUIRED BY HYDRAULIC CALCULATIONS) UP TO NEW ELEVENTH FLOOR SPRINKLER ZONE.

6 NEW SUPERVISED VALVE AND FLOW SWITCH FOR NEW ELEVENTH FLOOR SPRINKLER ZONE. REFER TO DETAIL A/1-FX101.

7 PROVIDE NEW SUPERVISED VALVE AT CEILING FOR MAINTENANCE USE. SIZE AS REQUIRED BY HYDRAULIC CALCULATIONS.

8 THE DIVISION 21 CONTRACTOR SHALL REROUTE EXISTING (APPROX. 1" SIZE) SPRINKLER PIPING TO CLEAR SPACE FOR NEW PNEUMATIC TUBE PIPING.

9 REMOVE EXISTING SPRINKLER HEAD AND PROVIDE NEW HEAD IN NEW DROPPED SOFFIT CEILING LOCATED EVEN WITH EXISTING BULKHEAD.

10 REMOVE EXISTING PIPING.

11 CAP EXISTING PIPING.

FIRE SUPPRESSION DESIGN NOTES

A PROVIDE COMPLETE REVISIONS TO THE FIRE SUPPRESSION SPRINKLER SYSTEM IN THE RENOVATED AREA AS INDICATED.

B COORDINATE WORK WITH VAMC AND ALL OTHER TRADES. EACH CONTRACTOR SHALL BE RESPONSIBLE FOR OFFSETTING AND/OR RELOCATING SERVICES DETERMINED TO BE IN CONFLICT WITH WORK OF OTHER TRADES.

C DESIGN SERVICES SHALL FOLLOW ALL VA STANDARD DESIGN PRACTICES, DETAILS, SPECIFICATIONS AND SITE SPECIFIC PROJECT ENGINEER REQUIREMENTS AS WELL AS WORK SHOWN ON THESE DOCUMENTS. ALL DEVIATIONS FROM AFOREMENTIONED REQUIREMENTS SHALL BE APPROVED BY THE PROJECT ENGINEER.

D VERIFY THAT THERE IS ADEQUATE SPACE TO INSTALL ALL NEW PIPING REQUIRED TO COMPLETE THIS WORK.

E ALL SPRINKLER PIPING IS LOCATED AT THE BOTTOM OF STRUCTURE IN EXPOSED STRUCTURAL AREAS UNLESS OTHERWISE INDICATED.

F THE BASIS OF DESIGN OF SPACING AND SIZING FOR THE COMPLETE FIRE SUPPRESSION SPRINKLER SYSTEM IS FOR A WET PIPE SYSTEM HYDRAULICALLY CALCULATED FOR A:

1 LIGHT HAZARD AREA LIMITED TO A MAXIMUM OF 225 SQ. FT. PER SPRINKLER WITH THE DENSITY OF 0.10 GPM/SQ. FT. OVER MOST THE MOST REMOTE 1500 SQ. FT. PROVIDE AN ADDITION OF 100 GPM HOSE ALLOWANCE.

2 ALL MECHANICAL, ELECTRICAL AND ETC. AREAS SHALL BE ORDINARY HAZARD (GROUP 1) LIMITED TO A MAXIMUM OF 130 SQ. FT. PER SPRINKLER WITH A DENSITY OF 0.15 GPM/SQ. FT. PROVIDE AN ADDITION OF 250 GPM HOSE ALLOWANCE.

3 ALL STORAGE, TRASH, FILE STORAGE AND ETC. AREAS SHALL BE ORDINARY HAZARD (GROUP 2) LIMITED TO A MAXIMUM OF 130 SQ. FT. PER SPRINKLER WITH A DENSITY OF 0.20 GPM/SQ. FT. PROVIDE AN ADDITION OF 250 GPM HOSE ALLOWANCE.

G ALL SPRINKLER HEAD LOCATIONS, RELATED PIPING LAYOUT AND SIZING SHALL BE BY DIVISION 21.

H THE ENTIRE SPRINKLER SYSTEM SHALL CONFORM TO VAMC, LOCAL, STATE AND NFPA STANDARDS, RULES AND REGULATIONS.

I CAREFULLY COORDINATE THE LOCATION OF ALL SPRINKLER HEADS AND PIPING WITH ALL OTHER TRADES AND THE ARCHITECT.

J VERIFY THE LOCATION OF ALL LIGHTING FIXTURES AND AIR DEVICES BEFORE INSTALLATION OF SPRINKLER HEADS.

K ALL SPRINKLER HEAD LOCATIONS MUST BE COORDINATED WITH ALL EQUIPMENT KINDRED TO OTHER TRADES. SPRINKLER HEAD LOCATIONS MUST BE APPROVED BY THE ARCHITECT BEFORE WORK COMMENCES. REFER TO THE ARCHITECTURAL PLANS FOR ADDITIONAL INFORMATION ON ALL CEILING TYPES, HEIGHTS, AND OTHER ARCHITECTURAL FEATURES.

L MAKE NECESSARY FLOW TEST, LAY OUT SYSTEMS, OBTAIN APPROVALS FROM THE AUTHORITIES HAVING JURISDICTION PRIOR TO BEGINNING ANY FABRICATION OR INSTALLATION WORK. PROVIDE NEW HYDRAULIC CALCULATIONS FOR THE RENOVATED AREAS TO VERIFY SYSTEM COMPLIANCE.

M SPRINKLER PIPING SHALL BE MINIMUM 1" SIZE. PROVIDE ALL HARD PIPING, NO FLEXIBLE PIPING ALLOWED.

N SPRINKLER HEADS (UNLESS OTHERWISE NOTED): EXPOSED AREAS - UPRIGHT OR PENDENT TYPE - STANDARD BRASS ALL HEADS SHALL BE UL LISTED AND FM APPROVED.

O SPRINKLER HEADS SHALL BE "QUICK RESPONSE" TYPE IN ALL AREAS EXCEPT HIGH TEMPERATURE AREAS.

P ANNULAR SPACE AT PIPE AND OTHER SIMILAR PENETRATION OF FIRE RATED ASSEMBLIES SHALL BE FIRESTOPPED. REFER TO SPECIFICATION SECTION 07 84 00 FIRESTOPPING. REFER TO ARCHITECTURAL DRAWINGS FOR CONSTRUCTION, LAYOUT AND FIRE RATING OF FLOORS, WALLS, PARTITIONS AND OTHER BUILDING ELEMENTS.

Q REFER TO SPECIFICATION SECTION 21 13 13 FOR FLOW TEST REQUIREMENTS.

R THE ELEVENTH FLOOR AREA SHALL BE A NEW SPRINKLER ZONE. NUMBERING SHALL BE AS DIRECTED BY THE PROJECT ENGINEER.

LEGEND

	SHUTOFF VALVE
	DIRECTION OF FLOW
F	FIRE SUPPRESSION PIPE
S	SPRINKLER PIPE (WET)
S	SUPERVISED VALVE
FS	FLOW SWITCH
	SPRINKLER
	VALVE ON RISER
P	PRESSURE GAUGE
FR	FIRE RISER
FDV	FIRE DEPARTMENT VALVE
SD	SPRINKLER DRAIN
SV	SUPERVISED VALVE
OH / 1	FIRE SUPPRESSION HAZARD CLASSIFICATION / ORDINARY HAZARD / GROUP 1
3	"NOTE" SYMBOL (FOR NOTES ON SAME SHEET)

DRAWING INDEX

SHEET	DESCRIPTION
1-FX101	THIRD, FIFTH, TENTH & ELEVENTH FLOOR PLANS - NEW WORK

FULLY SPRINKLERED

Revisions	Date

CONSULTANTS:

Heapy Engineering
Mechanical Electrical Commissioning Technology
Nationally Recognized Leader in Sustainability / LEED
1400 W Dorothy Lane, Dayton OH 45409-1310
Ph: 937-224-0861 Fax: 937-224-5777 www.heapy.com
HEAPY PROJECT No.:2012-04004 FIRM LICENSE No.:01528

STATE OF OHIO · JOHN A. BLACK 49341 · REGISTERED PROFESSIONAL ENGINEER

ARCHITECT/ENGINEERS:

JOHN POE ARCHITECTS
116 EAST THIRD STREET
DAYTON, OHIO 45402-2130
937 461 3290 PHONE
937 461 0260 FAX
jpa@johnpoe.com

Drawing Title: THIRD, FIFTH, TENTH & ELEVENTH FLOOR PLANS - NEW WORK

Approved: Project Director

Project Title: Upgrade Elevators, Pneumatic Tubes and Dumbwaiter

Location: Cininnati, Ohio

Date: 12/17/2012 | Checked: CSS | Drawn: RLT

Project No. | VA Project No. 539-13-101 | JPA Project No. 12008.00

Building Number: 1

Drawing Number: 1-FX101 | Dwg. of

Office of Construction and Facilities Management
Department of Veterans Affairs

DRAWING SYMBOLS

2 / H4 — DETAIL NUMBER; DRAWING NUMBER WHERE DRAWN

A / H7 — SECTION LETTER; DRAWING NUMBER WHERE DRAWN

BUILDING NO. WHERE EQUIPMENT IS LOCATED.
EQUIPMENT ABBREVIATION (SUPPLY FAN)

2-SF3 — SUPPLY FAN NO.3 IN BUILDING NO.2

TYPICAL UNIT NO.

1-01 — TERMINAL UNIT DESIGNATION; AIR HANDLING UNIT NUMBER

DUCTWORK SYMBOLS

UP / DN — SUPPLY DUCT (UP & DOWN)

UP / DN — EXHAUST DUCT (UP & DOWN)

UP / DN — RETURN AIR DUCT (UP & DOWN)

CEILING DIFFUSERS (FOUR WAY BLOW UNLESS OTHERWISE NOTED)

EXHAUST OR RETURN CEILING REGISTER OR GRILLE

SUPPLY TOP REGISTER OR GRILLE (WALL TYPE)

EXHAUST OR RETURN BOTTOM REGISTER OR GRILLE, (WALL TYPE)

EXHAUST OR RETURN TOP REGISTER OR GRILLE, (WALL TYPE)

VANED ELBOW & AIR SPLIT TYPE DUCT TAKE-OFF

R — INCLINED RISE, IN DIRECTION OF AIR FLOW

D — INCLINED DROP, IN DIRECTION OF AIR FLOW

FC — FLEXIBLE CONNECTION

VANED ELBOW (PROVIDE ALL SQUARE OR RECTANGULAR ELBOWS WITH VANES EVEN IF SYMBOL IS MISSING)

STANDARD RADIUS ELBOW

10/8 — NEW DUCT - WIDTH X DEPTH

ACCOUSTICAL DUCT LINING

STAINLESS STEEL DUCT

MANUAL VOLUME DAMPER

FIRE DAMPER

9'-6" — APPROXIMATE ELEVATION FROM FLOOR TO MIDDLE OF LISTED SIZE OF DUCT, PIPE, DEVICE OR EQUIPMENT ITEM. (TO BE USED AS AN AID IN COORDINATING THE VARIOUS TRADES.)

U/C — DOOR UNDERCUT BY GENERAL CONTRACTOR

PIPING SYMBOLS

HEATING

HPS (60)	HIGH PRESSURE STEAM (60 PSIG AND ABOVE) NUMBER INDICATES STEAM PRESSURE
HPR	HIGH PRESSURE STEAM CONDENSATE RETURN
MPS (30)	MEDIUM PRESSURE STEAM (16 PSIG THRU 59 PSIG) NUMBER INDICATES STEAM PRESSURE
MPR	MEDIUM PRESSURE STEAM CONDENSATE RETURN
LPS (5)	LOW PRESSURE STEAM (15 PSIG & BELOW) NUMBER INDICATES STEAM PRESSURE
LPR	LOW PRESSURE STEAM CONDENSATE RETURN
PC	PUMPED CONDENSATE RETURN
HWH	HOT WATER HEATING SUPPLY
HWHR	HOT WATER HEATING RETURN
V	VENT LINE

AIR CONDITIONING

CH	CHILLED WATER SUPPLY
CHR	CHILLED WATER RETURN
MU	MAKE-UP WATER
D	DRAIN LINE
L	REFRIGERANT LIQUID LINE
S	REFRIGERANT SUCTION LINE

GENERAL

ET	EXPANSION TANK PIPE
	DIRECTION OF PIPE PITCH (DOWN)
	DIRECTION OF FLOW
	ANCHOR
	PIPE GUIDE
	REDUCER OR INCREASER
	ECCENTRIC REDUCER
	TOP CONNECTION, 45 DEG. OR 90 DEG.
	BOTTOM CONNECTION, 45 DEG. OR 90 DEG.
	SIDE CONNECTION
	CAPPED OUTLET
	RISE OR DROP IN PIPE
	UNION
	ORIFICE UNION
	POINT OF CONNECTION BETWEEN NEW AND EXISTING WORK.
	INVERTED BUCKET TRAP SET INCLUDING PIPING ACCESSORIES (SEE STANDARD DETAIL)
	FLOAT AND THERMOSTATIC TRAP SET INCLUDING PIPING ACCESSORIES (SEE STANDARD DETAIL)
	THERMOSTATIC TRAP
	STRAINER
	THERMOMETER
	PRESSURE GAGE
	EXISTING PIPE TO BE REMOVED

VALVES

	GATE VALVE
	GLOBE VALVE
	GATE VALVE WITH 3/4" HOSE END ADAPTER
	CHECK VALVE
	ANGLE GLOBE VALVE
	BUTTERFLY VALVE
	BALL VALVE
	COMBINATION BALANCING/SHUT-OFF VALVE
	CIRCUIT SETTER
	STRAIGHT-THRU MODULATING CONTROL VALVE
	STRAIGHT-THRU TWO-POSITION CONTROL VALVE
	THREE-WAY MODULATING CONTROL VALVE
	AUTOMATIC FLOW CONTROL VALVE
	SAFETY VALVE OR PRESSURE RELIEF
	PRESSURE REDUCING VALVE
	MANUAL AIR VENT
	TEST PLUG (PRESSURE/TEMPERATURE)

CONTROLS

T H	ROOM CONTROL: THERMOSTAT, HUMIDISTAT
T	REMOTE BULB THERMOSTAT
T	DUCT OR PIPE THERMOSTAT (NOTE 1: PROVIDE 12" MIN. LENGTH IN DUCT WHEN SPACE PERMITS)
T	DUCT THERMOSTAT WITH AVERAGING ELEMENT
T H	ROOM SENSOR: TEMPERATURE, HUMIDITY
T	DUCT OR PIPE TEMP. SENSOR (SEE NOTE 1 ABOVE)
H	DUCT HUMIDITY SENSOR
SP	DUCT STATIC PRESSURE SENSOR
T	DUCT TEMPERATURE SENSOR WITH AVERAGING ELEMENT
F S	SMOKE DETECTOR (SEE ELECTRICAL SPECIFICATIONS)
C	HOLDING COIL IN MOTOR STARTER
R2	RELAY COIL
R2-A	CONTACT, NORMALLY OPEN (N.O.)
R2-B	CONTACT, NORMALLY CLOSED (N.C.)
	SWITCH
R	PILOT LIGHT (RED)
H1 N	CONTROL CIRCUIT CONN.
dP	DIFFERENTIAL PRESSURE SWITCH
DP SP	DIFFERENTIAL OR STATIC PRESSURE TRANSMITTER
CS	CURRENT SENSING RELAY

ABBREVIATIONS

AC	AIR CONDITIONING UNIT
AD	ACCESS DOOR
AF	AFTER FILTER
AFF	ABOVE FINISHED FLOOR
AFM	AIR FLOW MEASURING DEVICE
AFW	AIR FOIL WHEEL
AHU	AIR HANDLING UNIT
AI	ANALOG INPUT
AO	ANALOG OUTPUT
AP	ACCESS PANEL
AS	AIR SEPARATOR
ATC	AUTOMATIC TEMPERATURE CONTROLS
BIW	BACKWARD INCLINED WHEEL
BG	BOTTOM GRILLE (WALL TYPE)
BR	BOTTOM REGISTER (WALL TYPE)
C	CONVERTOR
C.A.V.	CONSTANT AIR VOLUME
CC	COOLING COIL
CCU	CENTRIFUGAL OR HELICAL ROTARY SCREW CHILLER UNIT
CD	CEILING DIFFUSER
CF	CENTRIFUGAL FAN
CG	CEILING GRILLE
CO	CLEAN OUT
CONV	CONVECTOR
CP	CONDENSATE PUMP
CR	CEILING REGISTER
CUH	CABINET UNIT HEATER
CW	COLD WATER
D	AUTOMATIC CONTROL DAMPER
Db	DRY BULB TEMPERATURE, DEG. F
dB	DECIBELS
DDC	DIRECT DIGITAL CONTROLS
DI	DIGITAL INPUT
DO	DIGITAL OUTPUT
DWDI	DOUBLE WIDTH DOUBLE INLET
E/A	EXHAUST AIR
ECC	ENGINEERING CONTROL CENTER
EER	ENERGY EFFICIENCY RATIO
EF	EXHAUST FAN
ET	EXPANSION TANK
EX.	EXISTING
FACP	FIRE ALARM CONTROL PANEL
FC	FLEXIBLE CONNECTION

ABBREVIATIONS

FCW	FORWARD CURVED WHEEL
FLR.	FLOOR
FD	FLOOR DRAIN
FTR	FIN TUBE RADIATION
GH	GRAVITY HOOD
HC	HEATING COIL
HP	HORSEPOWER
HPR	HIGH PRESSURE STEAM CONDENSATE RETURN
HPS	HIGH PRESSURE STEAM SUPPLY (60 PSIG & ABOVE)
HRP	HYDRONIC RADIANT CEILING PANEL
ICF	IN-LINE CENTRIFUGAL FAN
IFB	INTERNAL FACE & BYPASS
LPR	LOW PRESSURE STEAM CONDENSATE RETURN
LPS	LOW PRESSURE STEAM SUPPLY (15 PSIG & BELOW)
LTCP	LOCAL TEMPERATURE CONTROL PANEL
LBS/HR	POUNDS PER HOUR
MB	MIXING BOX
MPR	MEDIUM PRESSURE STEAM CONDENSATE RETURN
MPS	MEDIUM PRESSURE STEAM SUPPLY (16 PSIG THRU 59 PSIG)
MAX.	MAXIMUM
MIN.	MINIMUM
NOM.	NOMINAL
O.A.	OUTSIDE AIR
P	PUMP
PC	PUMPED CONDENSATE
PD	PRESSURE DROP (FEET OF WATER)
PEF	PROPELLER TYPE EXHAUST FAN
PF	PRE-FILTER
PH	PREHEAT COIL
POD	POWER OPERATED, OPPOSED BLADE DAMPER
PPD	POWER OPERATED, PARALLEL BLADE DAMPER
PRV	PRESSURE REDUCING VALVE
PUH	PROPELLER UNIT HEATER
R/A	RETURN AIR
RF	RETURN FAN
Rh	RELATIVE HUMIDITY
RV	POWER TYPE ROOF VENTILATOR
S/A	SUPPLY AIR
SCD	SMOKE CONTROL DAMPER
SD.	SMOKE DAMPER
SF	SUPPLY FAN
Sp. Gr.	SPECIFIC GRAVITY
SH	STEAM HUMIDIFIER
SP	STATIC PRESSURE (INCHES OF WATER)
SPS	STATIC PRESSURE SENSOR
SWSI	SINGLE WIDTH SINGLE INLET
TG	TOP GRILLE (WALL TYPE)
TR	TOP REGISTER (WALL TYPE)
U/C	DOOR UNDERCUT BY GENERAL CONTRACTOR
UH	UNIT HEATER
V	VALVE
V.A.V.	VARIABLE AIR VOLUME
VFD	VARIABLE FREQUENCY DRIVE
VSMC	VARIABLE SPEED MOTOR CONTROLLER
Wb	WET BULB TEMPERATURE, DEG. F

GENERAL NOTES:

1. ALL PIPING AND DUCTS IN FINISHED ROOMS OR SPACES SHALL BE CONCEALED IN A FURRED CHASE OR ABOVE THE SUSPENDED CEILING.
2. THE FIRST FIGURE OF DUCT SIZE INDICATES DIMENSION OF FACE SHOWN OR INDICATED.
3. ACCESS PANELS IN SUSPENDED CEILINGS ARE REQUIRED FOR ALL VALVES, TRAPS, DAMPERS, CLEANOUTS, CONTROLS, ETC. ACCESS PANELS SHALL BE FURNISHED AND INSTALLED UNDER THE ARCHITECTURAL SPECIFICATIONS.
4. TOTAL STATIC PRESSURE NOTED IN THE SCHEDULES INCLUDES DUCT SYSTEM, TERMINAL UNITS, FILTERS, COILS, ETC.
5. FOR TYPICAL STEAM, WATER AND REFRIGERANT PIPING CONNECTIONS TO EQUIPMENT, SEE STANDARD DETAILS AND PIPING SCHEMATICS.
6. DIFFUSER, REGISTER AND GRILLE SIZES SHOWN ON FLOOR PLANS ARE NECK SIZES.
7. WATER PIPE CONNECTIONS TO AIR HEATING AND COOLING COILS SHALL BE MADE TO PROVIDE COUNTER FLOW BETWEEN WATER AND AIR.
8. WALL TYPE EXHAUST REGISTERS NOTED AS "BR" ON DRAWINGS ARE TO BE INSTALLED WITH BOTTOM OF REGISTERS SEVEN INCHES ABOVE FINISHED FLOOR.
9. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATION OF CEILING DIFFUSERS, REGISTERS, AND GRILLES.
10. WHERE DUCTS OR PIPES ARE REMOVED THRU WALL/FLOOR/ROOF THAT IS TO REMAIN, PATCH WALL/FLOOR/ROOF OPENING TO MATCH EXISTING WHERE OPENING IS NOT RE-USED.
11. ALL PRESSURES LISTED ARE GAGE PRESSURE UNLESS OTHERWISE NOTED.
12. ALL CUTTING AND PATCHING REQUIRED FOR THE HVAC WORK SHALL BE INCLUDED IN THE HVAC CONTRACT. REFINISH ANY SURFACE DISTURBED UNDER THIS WORK TO MATCH EXISTING.
13. IN GENERAL, KEEP DUCT AND PIPING MAINS NEXT TO UNDERSIDE OF STRUCTURE.
14. ANNULAR SPACE OF ALL PIPE, CONDUIT, DUCT & OTHER SIMILAR PENETRATIONS OF FIRE RATED ASSEMBLIES SHALL BE FIRESTOPPED. IN ADDITION, PENETRATIONS THROUGH 0-HOUR RATED WALLS & FLOORS SHALL BE FIRESTOPPED TO RETARD PASSAGE OF FIRE & SMOKE.
15. UPON THE DISCOVERY OF ANY ASBESTOS MATERIAL, STOP WORK IMMEDIATELY AND REPORT IT TO THE VA ENGINEERING OFFICE. THE VA ENGINEERING GROUP WILL NOTIFY CONTRACTOR WHEN WORK IS SAFE TO PROCEED.
16. ANY REMOVED EQUIPMENT SHALL BE TURNED OVER TO THE VA. ITEMS NOT DESIRED BY THE VA SHALL BE REMOVED FROM THE PREMISES AND DISPOSED OF PROPERLY BY THE CONTRACTOR.
17. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION
18. THE CONTRACT DRAWINGS ARE NOT INTENDED TO SHOW EVERY VERTICAL OR HORIZONTAL OFFSET WHICH MAY BE NECESSARY TO COMPLETE THE SYSTEMS. COORDINATE WORK IN ADVANCE WITH ALL OTHER TRADES AND REPORT IMMEDIATELY AND DIFFICULTIES WHICH CAN BE ANTICIPATED.
19. FIELD VERIFY EXISTING CONDITIONS, INCLUDING DUCT, PIPE AND EQUIPMENT SIZES, SERVICES AND LOCATIONS PRIOR TO PERFORMING WORK.
20. HEPA FILTERED EXHAUST IS REQUIRED TO MAINTAIN A MINIMUM OF 0.01" W.G. NEGATIVE PRESSURE IN CONSTRUCTION AREAS. COORDINATE WITH GENERAL CONTRACTOR AND PROJECT ENGINEER.
21. ALL ABANDONED EXTRANEOUS PIPING, DUCTWORK, SUPPORTS, CONTROLS, ETC. SHALL BE REMOVED.
22. WHERE ROOFING WORK IS REQUIRED, THE EXISTING ROOFING MEMBRANE AND INSULATION SHALL BE CUT, REMOVED AND RESTORED AS REQUIRED TO ATTAIN A WATERTIGHT CONDITION. THE ROOFING SUB-CONTRACTOR SHALL BE A CERTIFIED INSTALL FOR SUCH INSTALLATION TO MAINTAIN THE EXITING WARRANTY ON THE ROOF. REFER TO ARCHITECTURAL DOCUMENTS FOR EXACT NEW AND EXISTING ROOFING TYPE.
23. WHEN NEW SUPPLY AND RETURN AIR DUCTS ARE CONNECTED TO EXISTING DUCTWORK, CLEAN BOTH NEW AND EXISTING DUCTWORK BY MOPPING AND VACUUM CLEANING INSIDE AND OUTSIDE BEFORE OPERATION.
24. ALL EXISTING DUCTWORK, PIPING, EQUIPMENT, CONTROLS, ETC. SHOWN DASHED SHALL BE REMOVED. THE MAJORITY OF WORK TO BE REMOVED IS SHOWN. REMOVE ALL INCIDENTAL ABANDONED DUCTWORK, PIPING, ETC., THAT MAY NOT BE SHOWN BUT IS ASSOCIATED WITH THE REMOVAL WORK.
25. INCLUDE ALL WORK NECESSARY TO ACCOMMODATE PHASING. REFER TO ARCHITECTURAL SHEET G002 GENERAL REQUIREMENTS SECTION 01 00 00.
26. REQUIRED SHUT-DOWNS OF THE SMOKE DETECTION SYSTEM AND FIRE SUPPRESSION SPRINKLER SYSTEM SHALL NOT OCCUR CONCURRENTLY AND SHALL COMPLY WITH THE JOINT COMMISSION ON ACCREDITATION OF HEALTHCARE ORGANIZATIONS (JCAHO)INTERIM LIFE SAFETY MEASURES (ILSM). COORDINATION BETWEEN PROJECT ENGINEER AND ALL TRADES SHALL BE REQUIRED BEFORE ANY SCHEDULED SHUT-DOWN OF THE SMOKE DETECTION SYSTEM OR FIRE SUPPRESSION SPRINKLER SYSTEM.
27. WHERE CONTROL DEVICES ARE REMOVED, PNEUMATIC LINES SHALL BE REMOVED BACK TO MAIN AND CAPPED.

DRAWING INDEX

Revisions	Date

CONSULTANTS:

Heapy Engineering
Mechanical Electrical Commissioning Technology
Nationally Recognized Leader in Sustainability / LEED
1400 W Dorothy Lane, Dayton OH 45409-1310
Ph: 937-224-0861 Fax: 937-224-5777 www.heapy.com
HEAPY PROJECT No.:2012-04004 FIRM LICENSE No.:01528

STATE OF OHIO — JOHN A. BLACK 49341 — REGISTERED PROFESSIONAL ENGINEER

ARCHITECT/ENGINEERS:

JOHN POE ARCHITECTS
116 EAST THIRD STREET
DAYTON, OHIO 45402-2130
937 461 3290 PHONE
937 461 0260 FAX
jpa@johnpoe.com

Drawing Title: INDEX, LEGEND, GENERAL NOTES

Approved: Project Director

Project Title: Upgrade Elevators, Pneumatic Tubes and Dumbwaiter

Location: Cininnati, Ohio

Date: 12/17/2012 | Checked: DLE | Drawn: PCW

Project No.
VA Project No. 539-13-101
JPA Project No. 12008.00

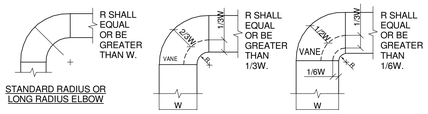
Building Number: MULTIPLE

Drawing Number: M001

Dwg. of

Office of Construction and Facilities Management
Department of Veterans Affairs

three inches = one foot
one and one-half inches = one foot
one inch = one foot
three-quarters inch = one foot
one-half inch = one foot
three-eighths inch = one foot
one-quarter inch = one foot
one-eighth inch = one foot



STANDARD RADIUS OR LONG RADIUS ELBOW

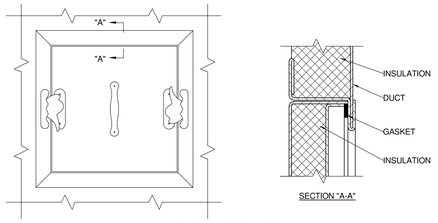
SHORT RADIUS ELBOW WITH ONE VANE

SHORT RADIUS ELBOW WITH TWO VANES

NOTES:

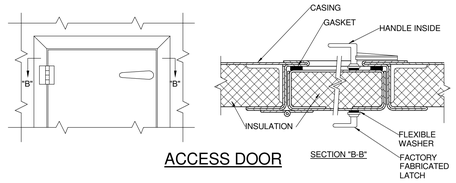
1. THE INTERIOR SURFACE OF ALL RADIUS ELBOWS SHALL BE MADE ROUND.
2. ALL STANDARD RADIUS ELBOWS CAN BE SUBSTITUTED WITH SHORT RADIUS ELBOWS. ALL SHORT RADIUS ELBOWS SHALL HAVE VANES. VANES SHALL BE CONSTRUCTED, SUPPORTED AND FASTENED AS RECOMMENDED BY SMACNA.

DUCTWORK RADIUS ELBOWS



SECTION "A-A"

ACCESS PANEL



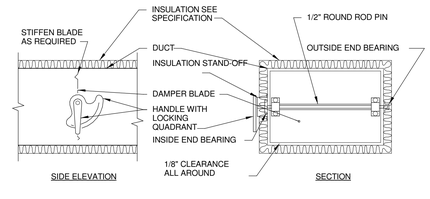
SECTION "B-B"

ACCESS DOOR

NOTES:

1. LATCHES SHALL BE OF THE WEDGE TYPE TO CLOSE DOORS TIGHTLY.
2. HINGES ON THE ACCESS DOORS SHALL HAVE NON-CORROSIVE PINS.
3. SEE SMACNA 2005, FIGURE 9-15

ACCESS PANEL AND DOOR DETAIL



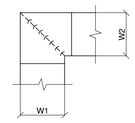
SIDE ELEVATION

SECTION

NOTES:

1. DELETE INSULATION STAND-OFF ON DUCTWORK WITHOUT EXTERIOR INSULATION.
2. DETAIL SHOWS SINGLE BLADE DAMPER. DAMPER INSTALLATION SHALL BE SIMILAR FOR MULTI-BLADE DAMPERS & ROUND DAMPERS.

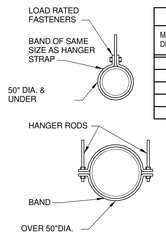
VOLUME DAMPER DETAIL



NOTES:

1. ALL VANE ELBOWS SHALL BE CONSTRUCTED AND INSTALLED AS DETAILED BY SMACNA.
2. WHEN W1 DOES NOT EQUAL W2, VANE SHALL BE SINGLE THICKNESS VANE TYPE REGARDLESS OF W DIMENSION.
3. ALL SINGLE THICKNESS VANES SHALL HAVE A 2" RADIUS, 1 1/2" MAXIMUM SPACE BETWEEN VANES AND A 3/4" TRAILING EDGE.
4. WHEN W EQUALS W2 AND W1 IS GREATER THAN 20", VANES SHALL BE DOUBLE VANE TYPE.

DUCTWORK SQUARE VANE ELBOWS

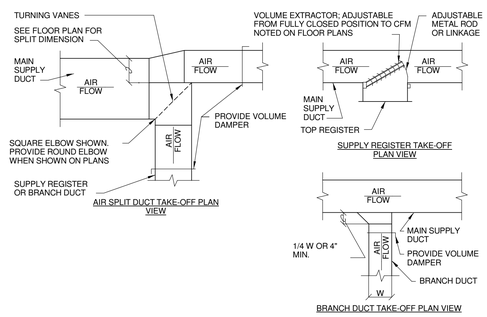


HANGER STRAPS OR RODS

MAX. DUCT DIA. - IN.	QUANTITY/SIZE IN.	MAX. LOAD LBS.	MAX. SPACING IN.
26	ONE 1 x 22 GA. STRAP	260	144
36	ONE 1 x 18 GA. STRAP	420	144
50	ONE 1 x 16 GA. STRAP	700	144
60	TWO 3/8 DIA. RODS	1320	144
84	TWO 1/2 DIA. RODS	2500	144

NOTE:
TABULATED DATA FROM SMACNA ALLOWS FOR DUCT REINFORCING AND INSULATION, BUT NO EXTERNAL LOAD.

ROUND DUCT HANGERS

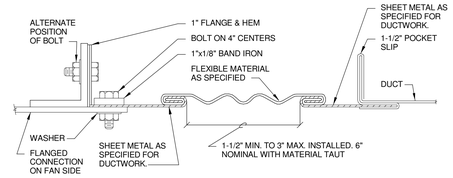


AIR SPLIT DUCT TAKE-OFF PLAN VIEW

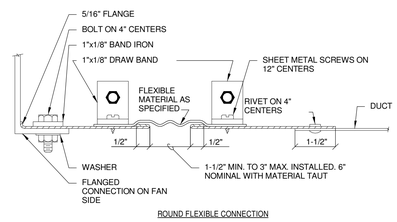
SUPPLY REGISTER TAKE-OFF PLAN VIEW

BRANCH DUCT TAKE-OFF PLAN VIEW

SUPPLY DUCTWORK TAKE-OFFS

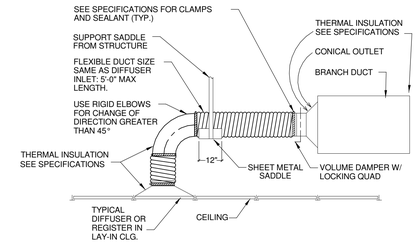


RECTANGULAR FLEXIBLE CONNECTION



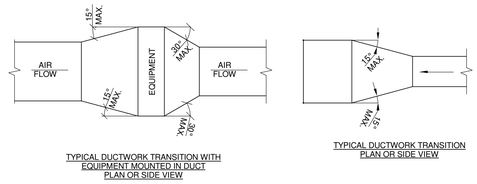
ROUND FLEXIBLE CONNECTION

FLEXIBLE DUCT CONNECTIONS



NOTE:
THE USE OF FLEXIBLE AIR DUCT CONNECTORS ARE NOT PERMITTED FOR THE DEDICATED AHU SERVING THE SURGICAL SUITE.

FLEXIBLE AIR DUCT CONNECTOR

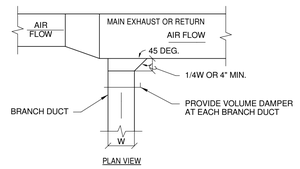


TYPICAL DUCTWORK TRANSITION WITH EQUIPMENT MOUNTED IN DUCT PLAN OR SIDE VIEW

TYPICAL DUCTWORK TRANSITION PLAN OR SIDE VIEW

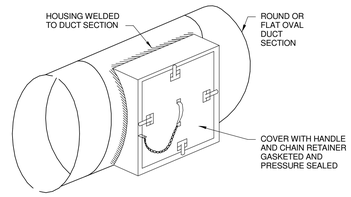
NOTE:
UNLESS OTHERWISE INDICATED ON PLANS, MAXIMUM ANGLES SHOWN SHALL APPLY.

DUCTWORK TRANSITIONS



PLAN VIEW

EXHAUST OR RETURN BRANCH DUCTWORK



ACCESS SECTION FOR ROUND/OVAL DUCT

Revisions	Date

CONSULTANTS:

Heapy Engineering
Mechanical Electrical Commissioning Technology
Nationally Recognized Leader in Sustainability / LEED
1400 W Dorothy Lane, Dayton OH 45409-1310
Ph: 937-224-0861 Fax: 937-224-5777 www.heapy.com
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STATE OF OHIO · JOHN A. BLACK · 49341 · REGISTERED PROFESSIONAL ENGINEER

ARCHITECT/ENGINEERS:

JOHN POE ARCHITECTS
116 EAST THIRD STREET
DAYTON, OHIO 45402-2130
937 461 3290 PHONE
937 461 0260 FAX
jpa@johnpoe.com

Drawing Title: DETAILS

Approved: Project Director

Project Title: Upgrade Elevators, Pneumatic Tubes and Dumbwaiter

Location: Cininnati, Ohio

Date: 12/17/2012 | Checked: DLE | Drawn: PCW

Project No.
VA Project No. 539-13-101
JPA Project No. 12008.00

Building Number: MULTIPLE

Drawing Number: M501

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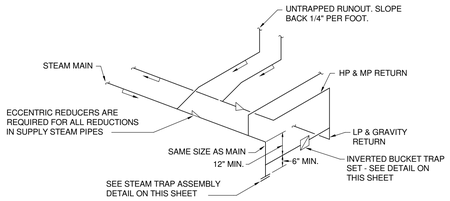
Department of Veterans Affairs



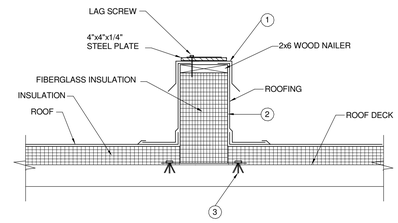
NOTES :

1 SLOPE MAINS AND BRANCHES DOWN 1" PER 40 FEET IN DIRECTION OF FLOW UNLESS SHOWN OTHERWISE.

2 LIMIT UNTRAPPED, COUNTERFLOW, RUNOUTS TO 10 FEET MAXIMUM.

3 END OF MAIN SHOWN, LOW POINT IN STEAM MAIN SIMILAR.

TYPICAL STEAM LINE & DRIP PIPING

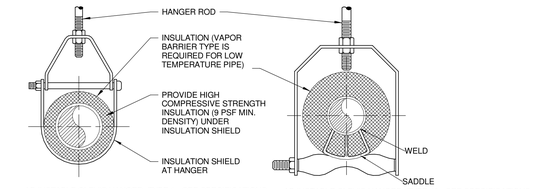


(1) 18 GAUGE GALVANIZED STEEL COUNTER-FLASHING.

(2) WELDED 14 GAUGE EQUIPMENT SUPPORT CURB, MEETING ASTM A-446, 525, 526 AND 527 REQUIREMENTS, WITH WELDED CORNERS WITH SEAMS JOINED BY CONTINUOUS WELDS. CURB SHALL BE INTERNALLY REINFORCED WITH BULKHEADS AND SPREADERS, 24" ON CENTER TO MEET LOAD RATING OF EQUIPMENT. CURB TO EXTEND 6" BEYOND EQUIPMENT. REFER TO FLOOR PLANS FOR HEIGHT.

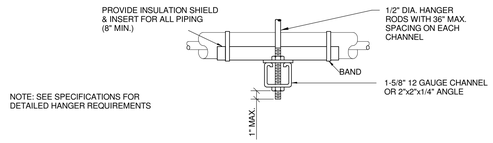
(3) SECURE CURB TO ROOF WITH EXPANSION BOLTS (CONCRETE ROOF) OR RUST RESISTANT BOLTS (METAL DECK AND BAR JOIST ROOF), 12" O.C.

EQUIPMENT/DUCT SUPPORT ROOF CURB



ADJUSTABLE CLEVIS HANGER TYPE 1 - SEE SPECIFICATIONS

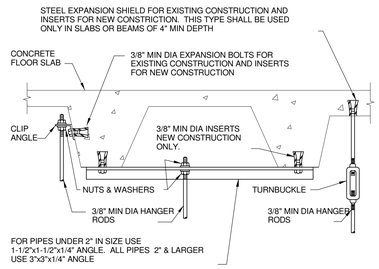
ADJUSTABLE CLEVIS HANGER TYPE 43 - SEE SPECIFICATIONS



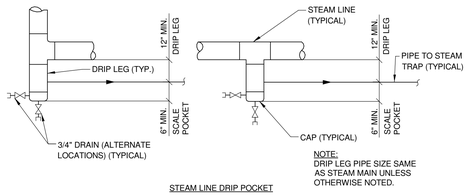
SIDE VIEW TRAPEZE HANGER FOR UP TO 1000 LB. UNIFORM LOAD

MAXIMUM PIPE/TUBING SUPPORT SPACING																
NOM. SIZE IN.	THRU 3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8	10	12	14	16	18	20	24
PIPE FT.	7	7	7	9	10	11	12	14	16	17	19	22	23	25	27	28	30	32
TUBING FT.	5 FT	6	7	8	8	9	10	12	13	14	16	-	-	-	-	-	-	-
NOTE: FOR TRAPEZE HANGER TAKE SPACING OF SMALLEST SIZE ON TRAPEZE.																		

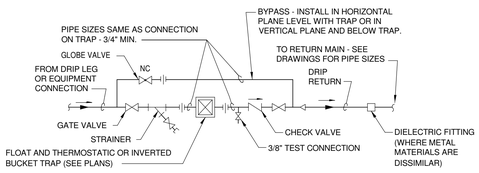
PIPE HANGERS



SECURING HANGER RODS IN CONCRETE

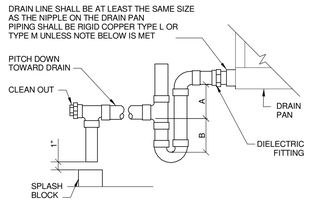


STEAM LINE DRIP POCKET



STEAM TRAP ASSEMBLY

STEAM LINE DRIP POCKET
STEAM TRAP ASSEMBLY

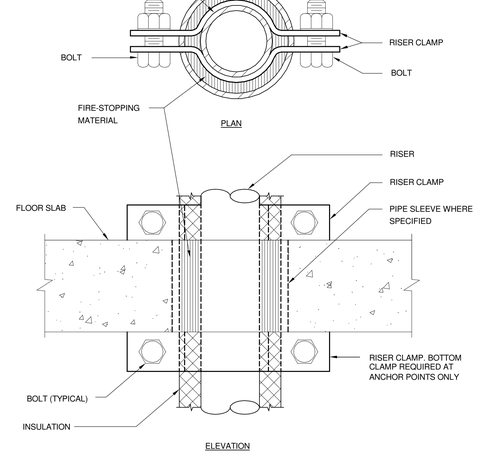


NOTE: 1. CPVC PIPE MAY BE USED ONLY IF APPROVED BY LOCAL VA AND IS INDOORS AND DOES NOT PASS THROUGH RATED BARRIERS. 2. DIELECTRIC FITTING TO BE USED WHEN TWO DISSIMILAR METALS ARE TO BE CONNECTED.

UNIT TYPE	A	B
DRAW THRU	2" PLUS X	X
BLOW THRU	1" MINIMUM	2X

WHERE X = STATIC PRESSURE IN PAN

ROOFTOP UNIT DRAIN TRAP DETAIL



SUPPORT/ANCHOR FOR PIPE RISERS

Revisions	Date

CONSULTANTS:

Heapy Engineering
Mechanical Electrical Commissioning Technology
Nationally Recognized Leader in Sustainability / LEED
1400 W Dorothy Lane, Dayton OH 45409-1310
Ph: 937-224-0861 Fax: 937-224-5777 www.heapy.com
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STATE OF OHIO — JOHN A. BLACK 49341 — REGISTERED PROFESSIONAL ENGINEER

ARCHITECT/ENGINEERS:

JOHN POE ARCHITECTS
116 EAST THIRD STREET
DAYTON, OHIO 45402-2130
937 461 3290 PHONE
937 461 0260 FAX
jpa@johnpoe.com

Drawing Title: DETAILS

Approved: Project Director

Project Title: Upgrade Elevators, Pneumatic Tubes and Dumbwaiter

Location: Cininnati, Ohio

Date: 12/17/2012 | Checked: DLE | Drawn: PCW

Project No.
VA Project No. 539-13-101
JPA Project No. 12008.00

Building Number: MULTIPLE

Drawing Number: M502

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Department of Veterans Affairs

HVAC DESIGN DATA

OUTDOOR DESIGN TEMPERATURES	93 DEG. F Db SUMMER 74 DEG. F Wb SUMMER 5 DEG. F Db WINTER		DESIGN ALTITUDE: 482 FT.	
INDOOR AREA DESIGN CONDITIONS	SUMMER		WINTER	
	Db (F)	% HUMIDITY	Db (F)	% HUMIDITY
ELEVATOR MACHINE ROOM	77	-	-	-

DUCT PRESSURE CLASS & LEAKAGE TABLE

SYSTEM	DUCT INVOLVED	POSITIVE (P) OR NEGATIVE (N) PRESSURE	SMACNA CONST. CLASS W.G.	SMACNA SEAL CLASS	SMACNA LEAKAGE CLASS	
					RECTANGULAR DUCT	ROUND DUCT
ALL SYSTEMS	ALL DUCTWORK EXCEPT AS LISTED BELOW.	P/N	* 2"	A	6	3
	SUPPLY AIR DUCTS FROM OUTLET OF AH-UNIT TO AIR TERMINAL UNITS.	P	4"	A	6	3
	SUPPLY AIR DUCTS FROM OUTLET OF AIR TERMINAL UNITS TO SUPPLY AIR DEVICES	P	1"	A	6	3
	RETURN AIR DUCTS FROM CEILING REGISTERS TO INLET OF AH-UNIT	N	-2"	A	6	3
	GENERAL EXHAUST DUCTS	N	-2"	A	6	3
	OUTSIDE AIR DUCTS	N	-2"	A	6	3

AIR DISTRIBUTION DEVICES

SYMBOL	DESCRIPTION	TYPE MOUNTING		MATERIAL		FINISH		ACCESSORIES	SEE NOTE
		LAY-IN	SURFACE	STEEL	ALUM.	E.C.L.	W.B.E.		
TR1	ADJUST. BLADE SUPPLY REGISTER		o	o			o	OPPOSED BLADE DAMPER	
TR2	FIXED BLADE RETURN/ EXHAUST REGISTER		o	o			o	OPPOSED BLADE DAMPER	

AIR COOLED VRF HEAT PUMP SCHEDULE

UNIT NO.	LOCATION	MIN. REFRIG. EFFECT BTUH	O.A. TEMP. °F	MIN. EER	UNIT ELECTRIC			NOTES
					VOLT-PHASE	MCA	MOCP	
1-VRFHP1	ROOF	240,000	95	11.5	460-3	19	25	1,2
8-VRFHP1	ROOF	34,200	95	14.0	208-1	25	40	3,4

NOTES:
1 PROVIDE LOW AMBIENT COOLING SOLUTION TO PROVIDE 100% COOLING CAPACITY AT OUTDOOR AIR TEMPERATURES DOWN TO -10 DEG F.

2 ELECTRICAL DATA IS PER INDIVIDUAL MODULE (2 MODULES TOTAL). (2) CONNECTIONS WILL BE REQUIRED.

3 PROVIDE LOW AMBIENT WIND BAFFLE TO PROVIDE OPERATION DOWN TO 0 DEG F.

4 MIN. SEER VALUE IS LISTED FOR THIS UNIT IN LIEU OF EER.

DX VRF FAN COIL UNITS

UNIT NO. (1)	TYPE	FAN CFM	COOLING CAPACITY (BTUH)	HEATING CAPACITY (BTUH)	FAN MOTOR				APPROXIMATE SIZE			NOTES
					E.S.P.	MCA	MOCP	VOLT-PHASE	L	W	H	
1-VRF1	HORIZ CEILING CONCEALED	2,000	72,000	80,000	0.4	4.5	15	208-3	45	50	19	1,2
1-VRF2	HORIZ CEILING CONCEALED	2,000	72,000	80,000	0.4	4.5	15	208-3	45	50	19	1,2
1-VRF3	HORIZ CEILING CONCEALED	2,000	72,000	80,000	0.4	4.5	15	208-3	45	50	19	1,2
1-VRF4	HORIZ CEILING CONCEALED	600	18,000	20,000	0.4	1.6	15	208-1	29	35	10	1,2
1-VRF5	HORIZ CEILING CONCEALED	600	18,000	20,000	0.4	1.6	15	208-1	29	35	10	1,2
8-VRF1	WALL MOUNTED	900	34,200	37,000	FREE DISC	1	-	208-1	62	10	14	3

NOTES :
1 PROVIDE FBM SERIES FILTER BOX WITH 2" THICK PLEATED, MERV 8 FILTER WITH UNIT. REAR INLET STANDARD FIELD CONVERTIBLE TO BOTTOM INLET AS REQUIRED.

2 VRF UNIT TO BE CONNECTED TO OUTDOOR UNIT 1-VRFHP1.

3 VRF UNIT TO BE CONNECTED TO OUTDOOR UNIT 8-VRFHP1.

PACKAGED DX ROOFTOP UNIT SCHEDULE

UNIT NO.	LOCATION	AREA SERVED	SUPPLY FAN NO.	CFM		EXTERNAL S.P. (1) IN.	SPECIFIED INTERNAL LOSSES (2) IN.	UNSPECIFIED INTERNAL LOSSES (3) IN.	FAN TOTAL S.P. (4) IN.	TYPE OF SYSTEM	INTEGRAL AIR-COOLED CONDENSER				UNIT ELEC.			
				SUPPLY	O.A.						MIN. MBH	O.A. TEMP.	MIN. EER	MIN. IEER	VOLT.-PHASE	FLA	MCA	MOCP
1-RTU1	BUILDING 1 ROOF	11TH FLOOR ELEVATOR PENTHOUSE	1-SF1	3,400	510	0.7	1.07	0.26	2.03	VAV	113	95	11.8	13.8	460-3	26	33	45
1-RTU2	BUILDING 1 ROOF	11TH FLOOR ELEVATOR PENTHOUSE	1-SF2	3,400	510	0.7	1.07	0.26	2.03	VAV	113	95	11.8	13.8	460-3	26	33	45

NOTES:
1 EXTERNAL STATIC PRESSURE REQUIRED AT DUCT CONNECTIONS TO INLET AND OUTLET OF RTU. MEASUREMENTS SHALL BE TAKEN WITHIN 3 FT. OF INLET AND OUTLET AT A POINT OF MAXIMUM ACCURACY.

2 TOTAL OF MAXIMUM PRESSURE DROPS OF COMPONENTS WHICH ARE SPECIFIED SEPARATELY, I.E. PREFILTERS, AFTER FILTERS, HEATING AND COOLING COILS, DIFFUSER PLATE AND SOUND ATTENUATOR. AIR FILTER PRESSURE DROP SHALL BE SELECTED AT MID-LIFE.

3 INTERNAL LOSS ALLOWANCE SHALL INCLUDE LOSSES DUE TO ENTRANCE AND EXIT OF RTU, MIXING BOXES, DIFFUSER SECTION (OTHER THAN DIFFUSER PLATE) INCLUDING LOSSES DUE TO FAILURE TO PROPERLY CONVERT FAN DISCHARGE VELOCITY PRESSURE TO STATIC PRESSURE, FAN INLET CONDITIONS, CASINGS, HUMIDIFERS, DAMPERS, ETC.

4 TOTAL FAN S.P = EXTERNAL STATIC PRESSURE + SPECIFIED INTERNAL LOSSES + UNSPECIFIED INTERAL LOSSES. MANUFACTURER SHALL PROVIDE SUBMITTAL SHOWING ACTUAL LOSSES OF ALL EQUIPMENT PROVIDED. REFER TO FAN SCHEDULE FOR ADDITIONAL FAN SELECTION INFORMATION.

FAN SCHEDULE

FAN NO.	LOCATION	FAN CFM	FAN T.S.P.	FAN TYPE	DESCRIPTION	WHEEL			MAX. RPM	DRIVE	MOTOR				SEE NOTE
						TYPE	MIN. DIA.	MAX. dBA			MAX. BHP	NOM. HP (3)	VOLT.-PHASE	VFD	
1-SF1	1-RTU1	3,400	2.03	PL	PLENUM FAN	BW	18.5	89	1,919	DIRECT	2.1	3	460-3	YES	1,2,3
1-SF2	1-RTU2	3,400	2.03	PL	PLENUM FAN	BW	18.5	89	1,919	DIRECT	2.1	3	460-3	YES	1,2,3
1-RF1	1-RTU1	3,000	1.39	CF	FORWARD CURVED	FCW	11	72	1,341	BELT	2.7	3	460-3	YES	1,2,3
1-RF2	1-RTU2	3,000	1.39	CF	FORWARD CURVED	FCW	11	72	1,341	BELT	2.7	3	460-3	YES	1,2,3

NOTES :
1 SCHEDULED MAXIMUM BHP IS FOR SCHEDULED SP PLUS TEN PERCENT. FORWARD CURVED WHEEL MAY BE SUBMITTED IN LIEU OF AIR FOIL WHEEL FOR AIR HANDLING UNITS IF SCHEDULED MAXIMUM BHP IS MET. IF UNIT COIL PRESSURE DROPS SUBMITTED ARE LESS THAN SCHEDULED, THEN THE SP REQUIREMENT MAY BE REDUCED ACCORDINGLY. MAXIMUM BHP MAY BE BASED ON THE REVISED SP PLUS TEN PERCENT.

2 VARIABLE SPEED DRIVE ASSOCIATED WITH THIS FAN SHALL BE PROVIDED BY THE UNIT MANUFACTURER. VSD SHALL BE FACTORY MOUNTED AND WIRED INSIDE A VENTILATED COMPARTMENT INSIDE THE RTU CASING. REFER TO ELECTRICAL SPECIFICATIONS FOR PRODUCT REQUIREMENTS OF VARIABLE SPEED DRIVE ASSOCIATED WITH THIS FAN.

3 MOTOR SHALL BE PREMIUM EFFICIENCY TYPE.

DX COOLING COIL SCHEDULE

COIL NO.	SYSTEM	CFM	MAX. FACE VEL. FPM.	MAX. S.P. IN	ENT. AIR °F		LVG. AIR °F		* MAX. SUCTION TEMP. @ COIL °F	BTUH
					Db	Wb	Db	Wb		
1-CC1	1-RTU1	3,400	400	0.42	78.0	64.2	52.6	52.4	42	112,890
1-CC2	1-RTU2	4,000	400	0.42	78.0	64.2	52.6	52.4	42	112,890

* DIRECT EXPANSION COIL CAPACITY SHALL BE BASED ON A SUCTION TEMP. OF 2°F HIGHER THAN SUCTION TEMP. OF COMPRESSOR FURNISHED.

AIR FILTER SCHEDULE

FILTER NO.	CFM	SYSTEM	MERV RATING	MAX. S.P. DROP (1)		HOUSING TYPE	MAX. FACE VELOCITY	SEE NOTE
				INITIAL	FINAL			
1-PF1	4,000	1-RTU1	8	0.31"	1.0"	SIDE ACCESS HOUSING	500	1,2
1-PF2	4,000	1-RTU2	8	0.31"	1.0"	SIDE ACCESS HOUSING	500	1,2
1-PF3	2,000	1-VRF1	8	0.31"	1.0"	SIDE ACCESS HOUSING	500	1,2
1-PF4	2,000	1-VRF2	8	0.31"	1.0"	SIDE ACCESS HOUSING	500	1,2
1-PF5	2,000	1-VRF3	8	0.31"	1.0"	SIDE ACCESS HOUSING	500	1,2
1-PF6	375	1-VRF4	8	0.31"	1.0"	SIDE ACCESS HOUSING	500	1,2
1-PF7	375	1-VRF5	8	0.31"	1.0"	SIDE ACCESS HOUSING	500	1,2

NOTES:
1 STATIC PRESSURE REQUIREMENTS BASED ON 500 FPM FACE VELOCITY. FINAL PRESSURE DROPS BASED ON VA'S RECOMMENDED CHANGE OVER PRESSURE DROP.

2 FILTER HOUSING TO BE PART OF ROOF TOP UNIT ASSEMBLY.

Revisions | Date

CONSULTANTS:

Heapy Engineering
Mechanical Electrical Commissioning Technology
Nationally Recognized Leader in Sustainability / LEED
1400 W Dorothy Lane, Dayton OH 45409-1310
Ph: 937-224-0861 Fax: 937-224-5777 www.heapy.com
HEAPY PROJECT No.:2012-04004 FIRM LICENSE No.:01528

STATE OF OHIO · JOHN A. BLACK 49341 · REGISTERED PROFESSIONAL ENGINEER

ARCHITECT/ENGINEERS:

JOHN POE ARCHITECTS
116 EAST THIRD STREET
DAYTON, OHIO 45402-2130
937 461 3290 PHONE
937 461 0260 FAX
jpa@johnpoe.com

Drawing Title: SCHEDULES

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Project Title: Upgrade Elevators, Pneumatic Tubes and Dumbwaiter

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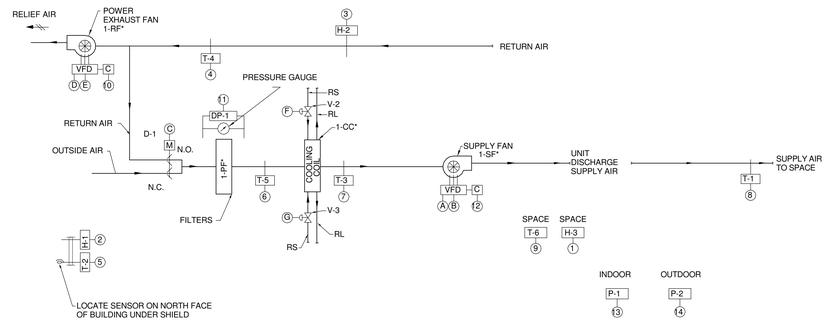
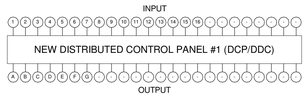


PACKAGED DX ROOFTOP UNITS 1-RTU1-2



1-RTU1-2 CONTROL PANEL

LEGEND (APPLIES TO PACKAGED DX ROOFTOP UNITS 143-RTU1-5)

C	CURRENT SENSING RELAY	TRANSMITS MOTOR CURRENT TO DCP TO INDICATE STATUS OF FANS.
DP-1	DIFFERENTIAL PRESSURE SENSOR	TRANSMITS DIFFERENTIAL PRESSURE TO DCP TO INDICATE FILTER CONDITION.
DCP	DIRECT DIGITAL CONTROL PANEL	CONTROLS OPERATION OF AIR HANDLING UNIT IN ACCORDANCE WITH THE SEQUENCE OF OPERATION.
D-1	MODULATING OUTSIDE AND RETURN AIR DAMPER	PROPORTIONS FLOW OF OUTSIDE AIR IN RESPONSE TO DCP AND CLOSES WHEN SUPPLY FAN STOPS.
ECC	ENGINEERING CONTROL CENTER	LOCATED IN ENGINEERING BUILDING FOR MONITORING OF SYSTEM OPERATIONS.
H-1	OUTSIDE AIR HUMIDITY SENSOR	SENSES AND TRANSMITS OUTSIDE AIR HUMIDITY TO DCP FOR CONTROL AND INDICATION.
H-2	RETURN AIR HUMIDITY SENSOR	SENSES AND TRANSMITS RETURN AIR HUMIDITY TO DCP FOR CONTROL AND INDICATION.
H-3	SPACE AIR HUMIDITY SENSOR	SENSES AND TRANSMITS SPACE AIR HUMIDITY TO DCP FOR CONTROL AND INDICATION.
P-1	SPACE PRESSURE SENSOR	SENSES AND TRANSMITS SPACE PRESSURE TO DCP FOR CONTROL AND INDICATION.
P-2	OUTSIDE AIR PRESSURE SENSOR	SENSES AND TRANSMITS OUTSIDE AIR PRESSURE TO DCP FOR CONTROL AND INDICATION.
T-1	DISCHARGE AIR TEMPERATURE SENSOR	SENSES AND TRANSMITS DISCHARGE AIR DRY BULB TEMPERATURE TO DCP FOR CONTROL AND INDICATION.
T-2	OUTSIDE AIR TEMPERATURE SENSOR	SENSES AND TRANSMITS OUTSIDE AIR DRY BULB TEMPERATURE TO DCP FOR CONTROL AND INDICATION.
T-3	COOLING COIL LEAVING AIR TEMPERTURE	SENSES AND TRANSMITS COOLING COIL DISCHARGE AIR TEMPERATURE TO DCP FOR CONTROL AND INDICATION.
T-4	RETURN AIR TEMPERATURE SENSOR	SENSES AND TRANSMITS RETURN AIR DRY BULB TEMPERATURE TO DCP FOR INDICATION ONLY.
T-5	MIXED AIR TEMPERATURE SENSOR	SENSES AND TRANSMITS MIXED AIR DRY BULB TEMPERATURE TO DCP FOR CONTROL AND INDICATION.
T-6	SPACE AIR TEMPERATURE SENSOR	SENSES AND TRANSMITS SPACE AIR DRY BULB TEMPERATURE TO DCP FOR CONTROL AND INDICATION.
V-1	MODULATING STEAM CONTROL VALVE	PROPORTIONS FLOW OF STEAM TO REHEAT COIL IN RESPONSE TO DCP.
V-2 V-3	DX COOLING SOLENOID VALVES	ENABLES FLOW OF REFERIGERANT TO COOLING COIL IN RESPONSE TO DCP.
VFD	VARIABLE FREQUENCY DRIVE WITH MOTOR STARTER	CONTROLS SUPPLY FAN MOTOR SPEED IN RESPONSE TO DCP.

GENERAL NOTES

1 A COMPLETE SYSTEM OF AUTOMATIC TEMPERATURE CONTROLS SHALL BE INSTALLED UNDER THIS CONTRACT, AS REQUIRED TO ACCOMPLISH THE SEQUENCE OF CONTROL FOR VARIOUS ITEMS OF EQUIPMENT AND SYSTEMS AS DESCRIBED HEREINAFTER. THE SYSTEM SHALL BE A DIRECT DIGITAL CONTROL SYSTEM UTILIZING ELECTRIC ACTUATION.

2 ELECTRICAL WORK INCLUDES A POWER SOURCE TO THE MOTOR STARTERS. ALL HVAC POWER SOURCES REQUIRED BEYOND THESE STARTERS OR BEYOND SOURCES EXPLICITLY SHOWN ON THE ELECTRICAL DRAWINGS, SHALL BE PROVIDED UNDER THE ATC WORK. THIS WORK SHALL INCLUDE BUT NOT BE LIMITED TO WIRING, CONDUIT, TRANSFORMERS, RELAYS AND FUSES.

3 BULB WELLS FOR TEMPERATURE SENSING AS INDICATED SHALL BE FURNISHED UNDER THE ATC WORK AND INSTALLED AS PART OF THE HVAC PIPING WORK. PIPING WORK SHALL INCLUDE PROPERLY SIZED WELDOLET OR THREADOLET FITTINGS PLACED AS DIRECTED BY THE CONTROL SYSTEM MANUFACTURER

4 POINTS LIST IS SHOWN AS AN AID TO THE CONTRACTOR INDICATING THE MINUMUM POINTS REQUIRED FOR CONTROL AND MONITORING. ALL INPUT AND OUTPUT POINTS, AND THEIR REQUIRED INTERFACE AND ACCESSORY HARDWARE, SHALL BE PROVIDED FOR A COMPLETE AND FUNCTIONAL CONTROL SYSTEM. IF OR WHEN ADDITIONAL POINTS ARE REQUIRED TO ACCOMPLISH THE SEQUENCES OF CONTROL SPECIFIED, THESE POINTS, ALONG WITH ADDITIONAL DIRECT DIGITAL CONTROL PANEL(S) (IF REQUIRED), SHALL ALSO BE PROVIDED.

1-RTU1-2 CONTROLLER POINTS LIST

POINT ID	DEVICE TAG	DEVICE DESCRIPTION	POINT TYPE DI	DO	AI	AO
1	H-3	INDOOR SPACE HUMIDITY SENSOR			X	
2	H-1	OUTSIDE AIR HUMIDITY SENSOR			X	
3	H-2	RETURN AIR HUMIDITY SENSOR			X	
4	T-4	RETURN AIR TEMPERATURE SENSOR			X	
5	T-2	OUTSIDE AIR TEMPERATURE SENSOR (GLOBAL POINT)			X	
6	T-5	MIXED AIR TEMPERATURE SENSOR (LOW LIMIT CONTROL)			X	
7	T-3	COOLING COIL LEAVING AIR TEMPERATURE SENSOR			X	
8	T-1	DISCHARGE AIR TEMPERATURE SENSOR			X	
9	T-6	INDOOR SPACE AIR TEMPERATURE SENSOR			X	
10	C	EXHAUST FAN STATUS CURRENT SWITCH	X		X	
11	DP-1	FILTER PRESSURE DROP			X	
12	C	SUPPLY FAN STATUS CURRENT SWITCH	X			
13	P-1	INDOOR SPACE PRESSURE SENSOR			X	
14	P-2	OUTSIDE AIR PRESSURE SENSOR			X	
A	VFD	SUPPLY FAN START-STOP		X		
B	VFD	SUPPLY FAN VARIABLE SPEED MOTOR CONTROLLER				X
C	D-1	MODULATING ECONOMIZER (RETURN/OUTSIDE AIR) DAMPER				X
D	VFD	POWER EXHAUST FAN START-STOP		X		
E	VFD	POWER EXHAUST FAN VARIABLE SPEED MOTOR CONTROLLER				X
F	V-2	DX COOLING VALVE (CIRCUIT #1)				X
G	V-3	DX COOLING VALVE (CIRCUIT #2)		X		

SEQUENCES OF OPERATIONS FOR VRF HEAT PUMPS

1 GENERAL

1.1 THE EQUIPMENT MANUFACTURER SHALL PROVIDE A COMPLETE SYSTEM OF AUTOMATIC CONTROLS CAPABLE OF FULLY SUPPORTING ALL COMPONENTS OF THE VRF SYSTEMS, INCLUDING BUT NOT LIMITED TO, OUTDOOR UNIT, AND ALL INDOOR FAN COIL UNITS.

1.2 SYSTEMS SHALL BE STARTED AND STOPPED WITH A REMOTE SIGNAL FROM THE E.C.C.

1.3 INITIAL SCHEDULES - UNITS SHALL BE CAPABLE OF 24/7, 365 DAYS PER YEAR OPERATION. WHERE VRF SYSTEM IS INSTALLED PARALLEL TO ROOFTOP UNITS, VRF SYSTEM SHALL BE THE FIRST STAGE OF COOLING DURING CONDITIONS WHEN THE O.A. ECONOMIZER OF THE RTUS IS NOT AVAILABLE.

1.4 PROVIDE A SINGLE THERMOSTAT TO CONTROL ALL (3) THREE VRF FAN COILS SERVING THE COMMON ELEVENTH FLOOR ELEVATOR PENTHOUSE. CONTROLS SHALL STAGE THE UNITS TO SATISFY ROOM SETPOINT AND TO EQUALIZE RUN TIME.

SEQUENCE OF OPERATION FOR 1-RTU1-2

1. UNIT IS NORMALLY STARTED AND STOPPED BY THE DCP OR REMOTELY AT THE ECC. H-O-A SWITCH SHALL BE KEPT IN THE "AUTO" POSITION. "HAND" AND "OFF" POSITIONS SHALL BE USED ONLY FOR MAINTENANCE. WHEN THE UNIT IS "OFF" FOR ANY REASON, OUTSIDE AIR DAMPERS SHALL BE CLOSED, RETURN AIR DAMPERS SHALL BE OPEN, AND UNIT SUPPLY FAN 1-SF* SHALL BE OFF.

2. THESE UNITS SERVE THE ELEVATOR EQUIPMENT PENTHOUSE. THE UNITS ARE SINGLE ZONE PACKAGED DX ROOFTOP UNITS WITH VARIABLE SPEED DRIVES ON BOTH THE SUPPLY FANS AND POWER EXHAUST FANS, OUTSIDE AND RETURN AIR DAMPERS, DIGITAL SCROLL COMPRESSORS, AND DX COOLING COILS. AN INTEGRAL AIR COOLED CONDENSING UNIT IS ASSOCIATED WITH EACH OF THESE SYSTEMS. RELIEF AIR IS THROUGH THE UNITS, BY AN INTEGRAL POWER EXHAUST FAN. CONTROLS CONTRACTOR IS RESPONSIBLE FOR FURNISHING DAMPER OPERATORS.

3. AIR HANDLING SYSTEM START/STOP - UNITS SHALL BE CAPABLE OF 24/7, 365 DAYS PER YEAR OPERATION. UNITS SHALL BE STAGED TO SATISFY ROOM SET POINT, AND TO EQUALIZE RUN TIME. COORDINATE EXACT SCHEDULE WITH COTR. WHERE VRF SYSTEM IS INSTALLED PARALLEL TO ROOFTOP UNITS, VRF SYSTEM SHALL BE THE FIRST STAGE OF COOLING DURING CONDITIONS WHEN THE O.A. ECONOMIZER OF THE RTUS IS NOT AVAILABLE.

4. MINIMUM OUTSIDE AIR - THIS PARAGRAPH DEFINES THE OPERATION OF THE OUTSIDE AIR AND RETURN AIR DAMPERS (ECONOMIZER DAMPERS) TO PROVIDE MINIMUM OUTSIDE AIR FOR VENTILATION. THE PHRASE "MINIMUM" IN THE SEQUENCES OF OPERATION SHALL INVOKE THIS PARAGRAPH. SIMPLE OUTSIDE AIR DAMPER SECTIONS (ALL DAMPER BLADES OPERATING IN UNISON) SHALL MODULATE WITH FAN SPEED AS DETERMINED BY AIR BALANCE TO PROVIDE THE SPECIFIED MINIMUM OUTSIDE AIR FLOW. RETURN AIR DAMPERS SHALL MODULATE AND POWER EXHAUST FAN SPEED SHALL MODULATE AS REQUIRED TO MAINTAIN SPACE PRESSURE REQUIREMENTS.

5. SAFETIES: THE FOLLOWING SAFETIES SHALL BE PROVIDED TO STOP THE ROOFTOP UNIT FANS AND POSITION THE CONTROL DEVICES TO THEIR "FAIL SAFE" POSITION, I.E., OUTSIDE AIR DAMPERS CLOSED, POWER EXHAUST FAN OFF, RETURN DAMPERS OPEN. SAFETIES SHALL BE WIRED INTO THE FAN STARTER CIRCUITS SUCH THAT THE SAFETY SHALL FUNCTION WHETHER THE START SELECTOR SWITCH IS IN THE HAND ON OR AUTOMATIC POSITION, AND SHALL INITIATE AN ALARM SIGNAL AT THE DCP AND ECC.

6. ROOM TEMPERATURE: DISCHARGE AIR RESET - RESET SHALL BE ACTIVE BELOW 60 OF O.A.T. THE ROOFTOP UNIT CONTROLS SHALL PROVIDE DISCHARGE AIR TEMPERATURE CONTROL - AS DETECTED BY T-1, - BASED ON THE FOLLOWING ROOM (SPACE) TEMPERATURE RESET SCHEDULE: 68 DEGREES F. ROOM TEMPERATURE, 77 DEGREES F. DISCHARGE AIR; 76 DEGREES F. ROOM TEMPERATURE, 55 DEGREES F. DISCHARGE AIR. ALL CONTROL SETPOINTS SHALL BE FULLY ADJUSTABLE TO MEET JOB CONDITIONS. SEE ITEM 9 BELOW "FAN VOLUME CONTROL" FOR RESET SCHEDULE ABOVE 60 ° F. O.A.T.

7. ENTHALPY ECONOMIZER CONTROL - OUTSIDE AIR TEMPERATURE AND HUMIDITY, AND RETURN AIR TEMPERATURE AND HUMIDITY SHALL BE MEASURED, AND THE ENTHALPY OF EACH DETERMINED. IF THE ENTHALPY OF THE OUTSIDE AIR IS LESS THAN THE ENTHALPY OF THE RETURN AIR, THE ECONOMIZER SHALL BE ENABLED. WHEN THE OUTSIDE AIR ENTHALPY IS HIGHER THAN THE RETURN AIR ENTHALPY AND MECHANICAL COOLING IS AVAILABLE, THE ECONOMIZER SHALL BE DISABLED. WHEN ECONOMIZER IS DISABLED, THE VRF SYSTEM SHALL BE UTILIZED FOR THE FIRST STAGE OF MECHANICAL COOLING. RTU SHALL OPERATE TO PROVIDE MINIMUM OUTSIDE AIR ONLY.

   ECONOMIZER CYCLE - WHEN THE UNIT IS OPERATED IN THE OCCUPIED MODE, THE MINIMUM OUTSIDE AIR SHALL BE PROVIDED. THE RETURN AIR DAMPERS SHALL MODULATE AS REQUIRED AND POWER EXHAUST FAN SPEED SHALL MODULATE TO MAINTAIN SPACE PRESSURE REQUIREMENTS, THIS CONDITION IS THE NORMAL POSITION AND SHALL BE MAINTAINED DURING THE OCCUPIED MODE EXCEPT DURING THE "ECONOMIZER" CYCLE. DURING THE "ECONOMIZER" CYCLE, THE AMOUNT OF OUTSIDE AIR AND RELIEF AIR SHALL BE INCREASED AS REQUIRED TO MAINTAIN THE UNIT DISCHARGE AIR TEMPERATURE SETPOINT. PROVIDE A MIXED AIR SENSOR AND LOW LIMIT CONTROL SET AT 50 DEGREES F. TO PREVENT OVER-OPENING OF THE FRESH AIR DAMPERS. ALL CONTROL SETPOINTS SHALL BE FULLY ADJUSTABLE TO MEET JOB CONDITIONS.

8. DX COOLING COIL - WHEN THE ECONOMIZER IS ACTIVE AND OUTSIDE AIR DAMPERS ARE FULL OPEN TO OUTSIDE AIR AND THE UNIT DISCHARGE AIR TEMPERATURE RISES ABOVE SETPOINT, THE SOLENOID VALVES AND COMPRESSOR CAPACITY SHALL BE MODULATED TO SATISFY THE UNIT DICHARGE AIR TEMPERATURE SETPOINT. PROVIDE ON AND OFF TIME DELAYS BETWEEN COMPRESSOR STARTS. WHEN THE MINIMUM STEP OF DX COOLING IS ENERGIZED AND THE DISCHARGE AIR TEMPERATURE FALLS BELOW 55 DEGREES F. AND THE ECONOMIZER IS ACTIVE, THE ECONOMIZER DAMPERS SHALL MODULATE SLOWLY BACK TOWARD MINIMUM POSITION UNTIL DISCHARGE AIR TEMPERATURE RISES ABOVE 55 DEGREES F. INTERLOOK COOLING CONTROL WITH SUPPLY FAN STATUS CURRENT SWITCH, TO KEEP COOLING OFF UNLESS THE FAN IS OPERATING.

   WHEN SPACE TEMPERATURE SETPOINT IS SATISFIED AS DETECTED BY T-6, AND SPACE HUMIDITY LEVEL IS ABOVE SETPOINT AS DETECTED BY H-3, THE SOLENOID VALVES AND COMPRESSOR STEPPING SHALL BE ENERGIZED IN SEQUENCE TO COOL AND DEHUMIDIFY THE SUPPLY AIR, UNTIL H-3 SETPOINT IS SATISFIED.

9. FAN VOLUME CONTROL - THE VARIABLE SPEED DRIVE ON THE SUPPLY FAN SHALL BE MODULATED. WHEN THE OUTSIDE AIR TEMPERATURE IS BELOW 60 DEGREES F., THE FAN SHALL REDUCE TO 50% AIR FLOW AND THE RESET SCHEDULE SHALL MODULATE THE ECONOMIZER FOR COOLING. THE SPACE TEMPERATURE SETPOINT SHALL BE 77 DEGREES F. IF THE SPACE FALLS OR RISES MORE THAN 2 DEGREES F. FROM THE SETPOINT, THE SUPPLY FAN SPEED SHALL BE INCREASED SLOWLY UNTIL THE SPACE IS WITHIN 1.5 DEGREES F. OF SETPOINT. ABOVE 60 DEGREES F. OUTSIDE AIR TEMPERATURE, THE SUPPLY FAN SHALL HAVE A 50% AIR FLOW MINIMUM. ((ADJUSTABLE) DEPENDENT ON RTU CAPABILITY). THE ROOM TEMPERATURE SETPOINT SHALL RESET THE DISCHARGE AIR, AS DETECTED BY T-1, FROM 77 DEGREES F. TO 55 DEGREES F. AS SPACE TEMPERATURE RISES ABOVE SETPOINT. IF THE ROOM IS MORE THAN 2 DEGREES F. ABOVE SETPOINT, THE SUPPLY FAN SPEED SHALL BE INCREASED UNTIL SPACE IS WITHIN 1.5 DEGREES F. OF SETPOINT.

   THE VARIABLE SPEED DRIVE ON THE POWER EXHAUST FAN SHALL BE ENABLED AND MODULATED AS FOLLOWS: WHENEVER THE SPACE PRESSURE DIFFERENTIAL WITH RESPECT TO OUTSIDE RISES TO 0.1 INCHES WATER (ADJUSTABLE), AS SENSED BY PRESSURE SENSORS P-2 (OUTSIDE) & P-1 (INDOOR), ASSOCIATED ROOFTOP UNIT POWER EXHAUST FAN SHALL START AND SLOWLY INCREASE SPEED TO MAINTAIN INDOOR POSITIVE PRESSURE AT SETPOINT OF 0.1 INCHES WATER WITH RESPECT TO OUTSIDE.

10. SUPPLY FAN AND POWER EXHAUST FAN VARIABLE FREQUENCY DRIVES SHALL RESPOND TO START/STOP COMMANDS AND ALL SAFETIES (FREEZE, SMOKE, ETC.) WHETHER IN THE AUTOMATIC OR BYPASS MODES. UPON FAILURE OF THE VFD, THE SUPPLY FAN AND POWER EXHAUST FAN SHALL BE STARTED/STOPPED MANUALLY AT THE DCP OR THE ECC THROUGH THE BYPASS STARTER. FAN SHALL THEN BE OPERATED AT CONSTANT SPEED.

Revisions	Date

CONSULTANTS:

Heapy Engineering
Mechanical Electrical Commissioning Technology
Nationally Recognized Leader in Sustainability / LEED
1400 W Dorothy Lane, Dayton OH 45409-1310
Ph: 937-224-0861 Fax: 937-224-5777 www.heapy.com
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STATE OF OHIO — JOHN A. BLACK 49341 — REGISTERED PROFESSIONAL ENGINEER

ARCHITECT/ENGINEERS:

JOHN POE ARCHITECTS
116 EAST THIRD STREET
DAYTON, OHIO 45402-2130
937 461 3290 PHONE
937 461 0260 FAX
jpa@johnpoe.com

Drawing Title: CONTROLS AND AUTOMATION

Approved: Project Director

Project Title: Upgrade Elevators, Pneumatic Tubes and Dumbwaiter

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Date: 12/17/2012 | Checked: DLE | Drawn: PCW

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VA Project No. 539-13-101
JPA Project No. 12008.00

Building Number: MULTIPLE

Drawing Number: M701
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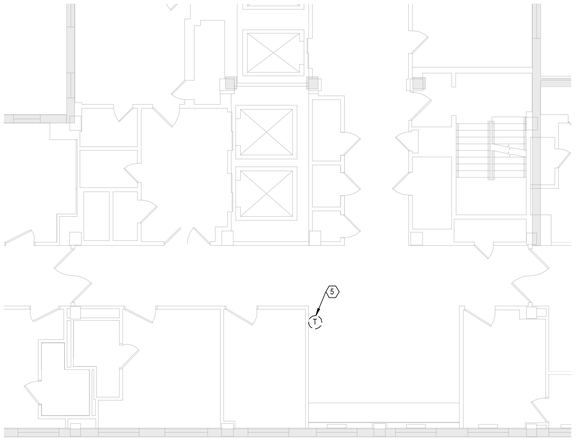
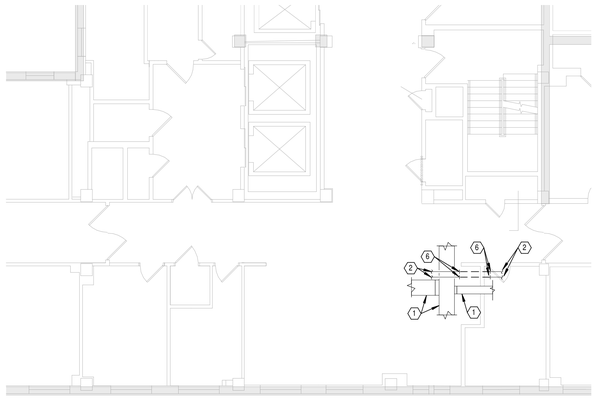


N 3

DEDUCT ALTERNATE #2

PARTIAL FIFTH FLOOR PLAN - REMOVALS

Scale: 1/8" = 1'-0"

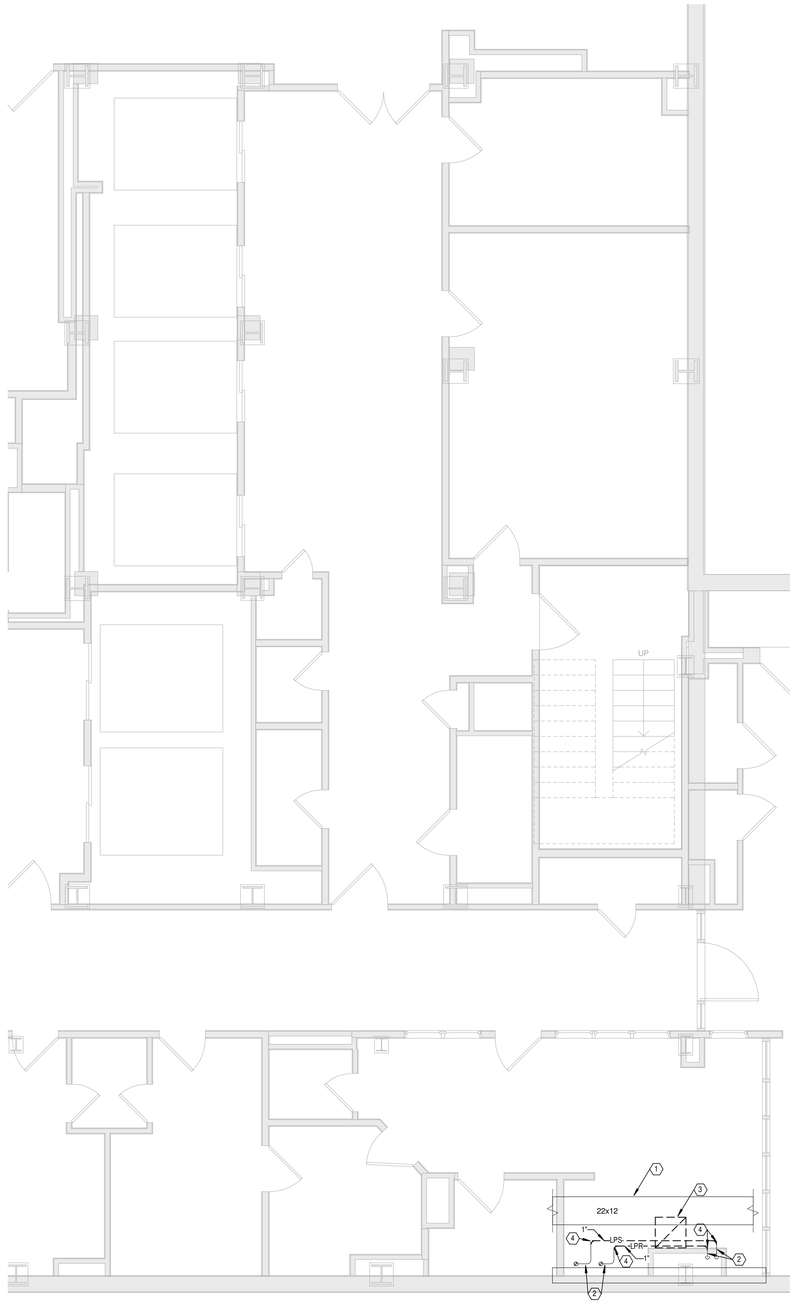


N 2

DEDUCT ALTERNATE #2

PARTIAL SIXTH FLOOR PLAN - REMOVALS

Scale: 1/8" = 1'-0"



N 1

DEDUCT ALTERNATE #1

EIGHTH FLOOR PARTIAL PLAN - REMOVALS

Scale: 1/4" = 1'-0"

GENERAL NOTES

A REFER TO SHEET M001 FOR LEGEND, ABBREVIATIONS, AND ADDITIONAL GENERAL NOTES.

B REFER TO RISER DIAGRAM ON ARCHITECTURAL SHEET A121 FOR MORE INFORMATION ON DEDUCT ALTERNATES.

PLAN NOTES

1 EXISTING DUCTWORK TO REMAIN.

2 EXISTING PIPING TO REMAIN.

3 REMOVE AIR DEVICE AND ASSOCIATED DUCTWORK BACK TO THIS POINT AND CAP.

4 REMOVE STEAM PIPING BACK TO THIS POINT FOR RECONNECTION IN NEW WORK.

5 REMOVE EXISTING THERMOSTAT AND ASSOCIATED WIRING FOR RELOCATION IN NEW WORK.

6 REMOVE WATER PIPING BACK TO THIS POINT FOR RECONNECTION IN NEW WORK.

Revisions	Date

CONSULTANTS:

Heapy Engineering
Mechanical Electrical Commissioning Technology
Nationally Recognized Leader in Sustainability / LEED
1400 W Dorothy Lane, Dayton OH 45409-1310
Ph: 937-224-0861 Fax: 937-224-5777 www.heapy.com
HEAPY PROJECT No.:2012-04004 FIRM LICENSE No.:01528

STATE OF OHIO · JOHN A. BLACK · 49341 · REGISTERED PROFESSIONAL ENGINEER

ARCHITECT/ENGINEERS:

JOHN POE ARCHITECTS
116 EAST THIRD STREET
DAYTON, OHIO 45402-2130
937 461 3290 PHONE
937 461 0260 FAX
jpa@johnpoe.com

Drawing Title: FIFTH, SIXTH, AND EIGHTH FLOOR PARTIAL PLAN - REMOVALS

Approved: Project Director

Project Title: Upgrade Elevators, Pneumatic Tubes and Dumbwaiter

Location: Cininnati, Ohio

Date: 12/17/2012 | Checked: DLE | Drawn: PCW

Project No.
VA Project No. 539-13-101
JPA Project No. 12008.00

Building Number: 1

Drawing Number: 1-MD101

Dwg. of

Office of Construction and Facilities Management
Department of Veterans Affairs

GENERAL NOTES

A REFER TO SHEET M001 FOR LEGEND, ABBREVIATIONS, AND ADDITIONAL GENERAL NOTES.

B INCLUDE ALL WORK NECESSARY TO ACCOMMODATE PHASING. REFER TO ARCHITECTURAL SHEET G002 AND GENERAL REQUIREMENTS SECTION 01 00 00.

C PROVIDE TEMPORARY COOLING AS REQUIRED TO KEEP ELEVATOR PENTHOUSE CONDITIONED DURING CONSTRUCTION.

PLAN NOTES

1 REMOVE EXISTING ROOFTOP UNIT AND ASSOCIATED ROOF CURB, CONTROLS, WIRING, ETC.

2 REMOVE EXISTING DUCTWORK AND ASSOCIATED DAMPERS, SUPPORTS, ETC.

3 REMOVE EXISTING AIR DEVICE.

4 REMOVE EXISTING RETURN AIR GRATING.

5 EXISTING VARIABLE FREQUENCY DRIVE TO REMAIN.

6 EXISTING ATC CABINET TO REMAIN.

7 EXISTING ELECTRICAL EQUIPMENT TO REMAIN.

8 EXISTING AIR STORAGE TANK TO REMAIN.

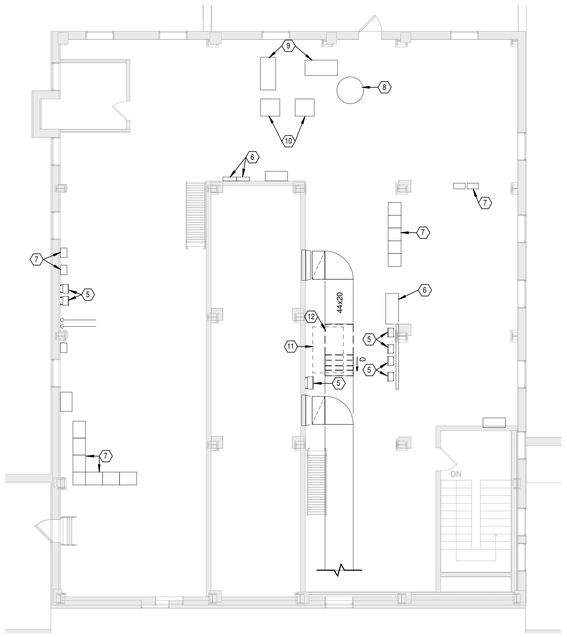
9 EXISTING AIR COMPRESSOR TO REMAIN.

10 EXISTING AIR DRYER TO REMAIN.

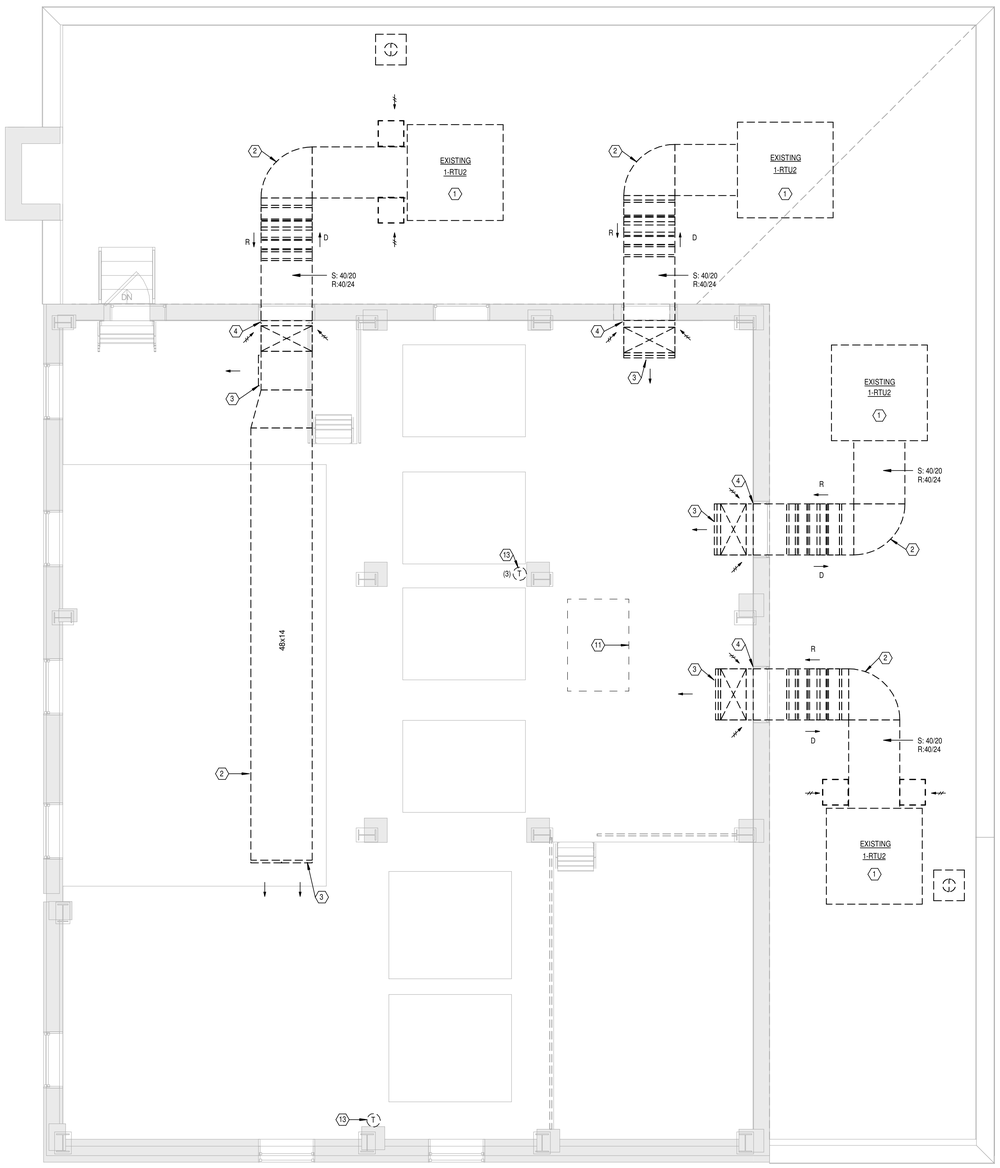
11 4' X 6' ACCESS HATCH FROM 9TH FLOOR ELEVATOR LOBBY TO 11TH FLOOR PENTHOUSE.

12 IF USE OF 4' X 6' HATCH/HOISTWAY IS REQUIRED FOR EQUIPMENT INSTALLATION REMOVE THIS SECTION OF DUCTWORK AND CAP OPENINGS ON EITHER END.

13 REMOVE EXISTING THERMOSTAT.



N 2 TENTH FLOOR PLAN - REMOVALS
Scale: 1/8" = 1'-0"



N 1 ELEVENTH FLOOR PLAN - REMOVALS
Scale: 1/4" = 1'-0"

Revisions	Date

CONSULTANTS:

Heapy Engineering
Mechanical Electrical Commissioning Technology
Nationally Recognized Leader in Sustainability / LEED
1400 W Dorothy Lane, Dayton OH 45409-1310
Ph: 937-224-0861 Fax: 937-224-5777 www.heapy.com
HEAPY PROJECT No.:2012-04004 FIRM LICENSE No.:01528

STATE OF OHIO · JOHN A. BLACK · 49341 · REGISTERED PROFESSIONAL ENGINEER

ARCHITECT/ENGINEERS:

JOHN POE ARCHITECTS
116 EAST THIRD STREET
DAYTON, OHIO 45402-2130
937 461 3290 PHONE
937 461 0260 FAX
jpa@johnpoe.com

Drawing Title: TENTH AND ELEVENTH FLOOR PLANS - REMOVALS

Approved: Project Director

Project Title: Upgrade Elevators, Pneumatic Tubes and Dumbwaiter

Location: Cininnati, Ohio

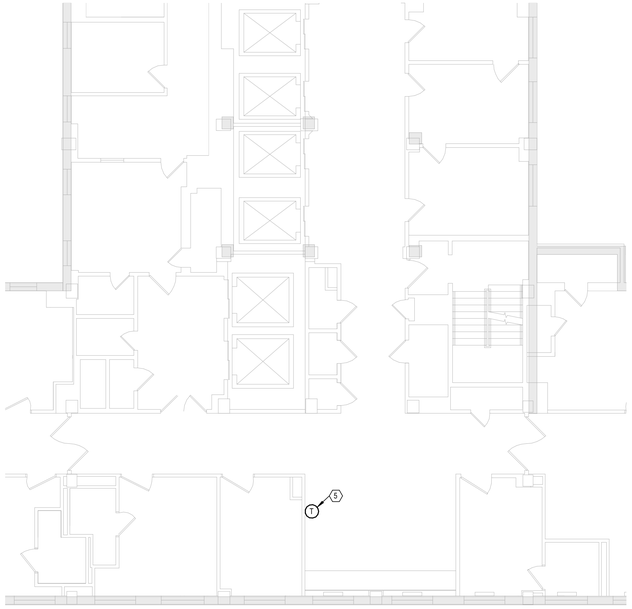
Date: 12/17/2012 | Checked: DLE | Drawn: PCW

Project No.
VA Project No. 539-13-101
JPA Project No. 12008.00

Building Number: 1

Drawing Number: 1-MD102
Dwg. of

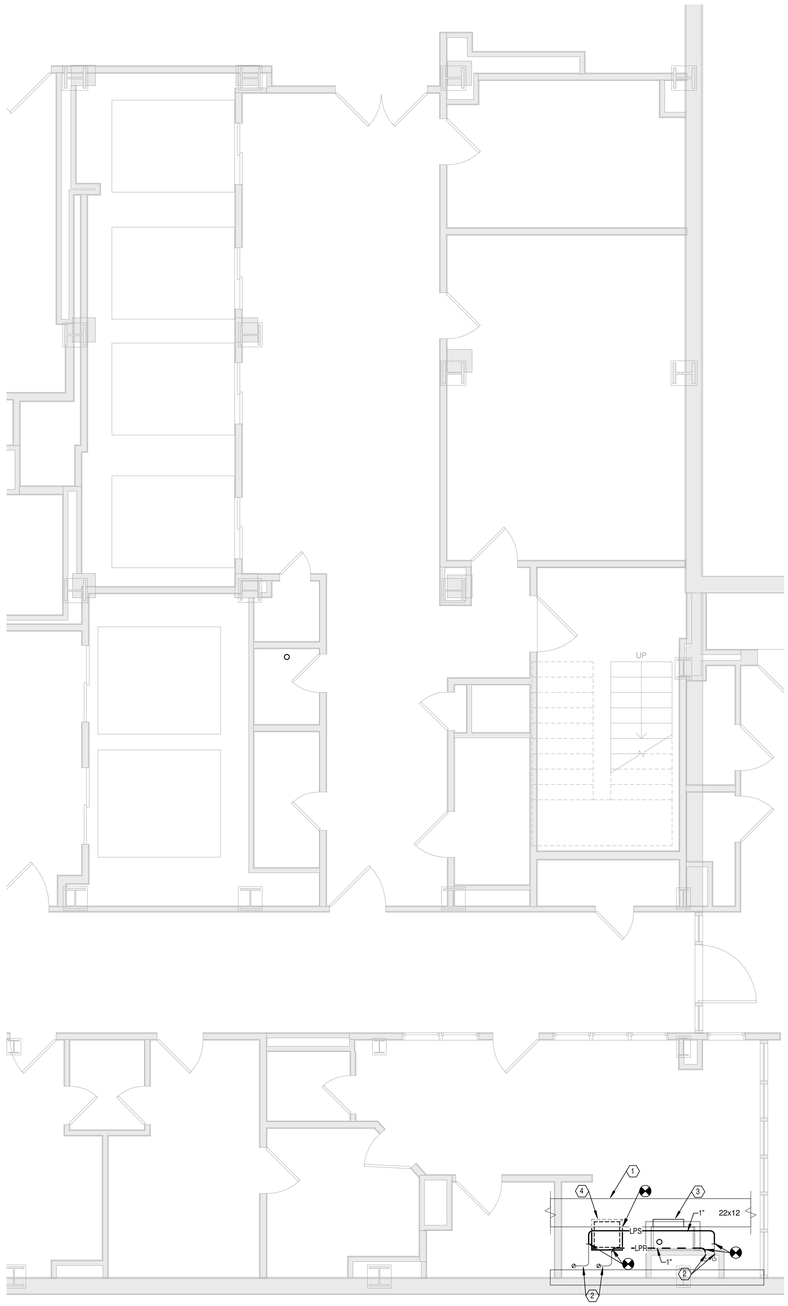
Office of Construction and Facilities Management
Department of Veterans Affairs



DEDUCT ALTERNATE #2

N 3 PARTIAL FIFTH FLOOR PLAN - NEW WORK

Scale: 1/8" = 1'-0"



GENERAL NOTES

A REFER TO SHEET M001 FOR LEGEND, ABBREVIATIONS, AND ADDITIONAL GENERAL NOTES.

B REFER TO RISER DIAGRAM ON ARCHITECTURAL SHEET A121 FOR MORE INFORMATION ON DEDUCT ALTERNATES.

PLAN NOTES

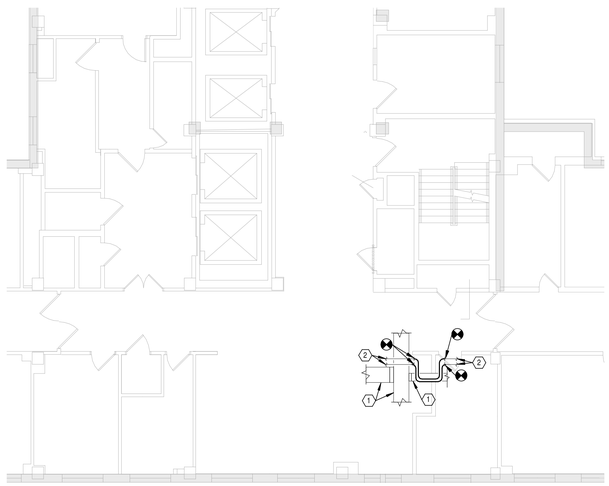
1 EXISTING DUCTWORK TO REMAIN.

2 EXISTING PIPING TO REMAIN.

3 CAP DUCT, SEAL AIR TIGHT.

4 RECONNECT RETURN AIR DEVICE PLENUM BOX TO RETURN AIR DUCT.

5 RELOCATE THERMOSTAT TO THIS APPROXIMATE LOCATION. PROVIDE NEW WIRING AS REQUIRED.



DEDUCT ALTERNATE #2

N 2 PARTIAL SIXTH FLOOR PLAN - NEW WORK

Scale: 1/8" = 1'-0"

DEDUCT ALTERNATE #1

N 1 EIGHTH FLOOR PARTIAL PLAN - NEW WORK

Scale: 1/4" = 1'-0"

Revisions	Date

CONSULTANTS:

Heapy Engineering
Mechanical Electrical Commissioning Technology
Nationally Recognized Leader in Sustainability / LEED
1400 W Dorothy Lane, Dayton OH 45409-1310
Ph: 937-224-0861 Fax: 937-224-5777 www.heapy.com
HEAPY PROJECT No.:2012-04004 FIRM LICENSE No.:01528

STATE OF OHIO · JOHN A. BLACK · 49341 · REGISTERED PROFESSIONAL ENGINEER

ARCHITECT/ENGINEERS:

JOHN POE ARCHITECTS
116 EAST THIRD STREET
DAYTON, OHIO 45402-2130
937 461 3290 PHONE
937 461 0290 FAX
jpa@johnpoe.com

Drawing Title: EIGHTH FLOOR PARTIAL PLAN - NEW WORK

Approved: Project Director

Project Title: Upgrade Elevators, Pneumatic Tubes and Dumbwaiter

Location: Cininnati, Ohio

Date: 12/17/2012 | Checked: DLE | Drawn: PCW

Project No. | VA Project No. 539-13-101 | JPA Project No. 12008.00

Building Number: 1

Drawing Number: 1-MH101

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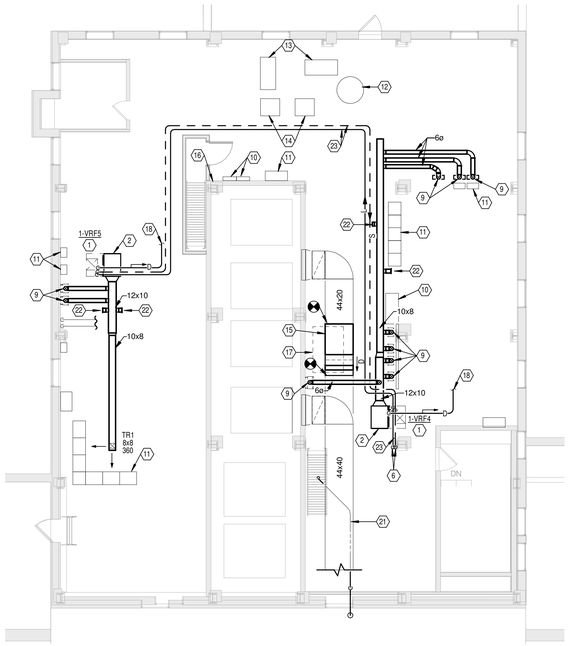
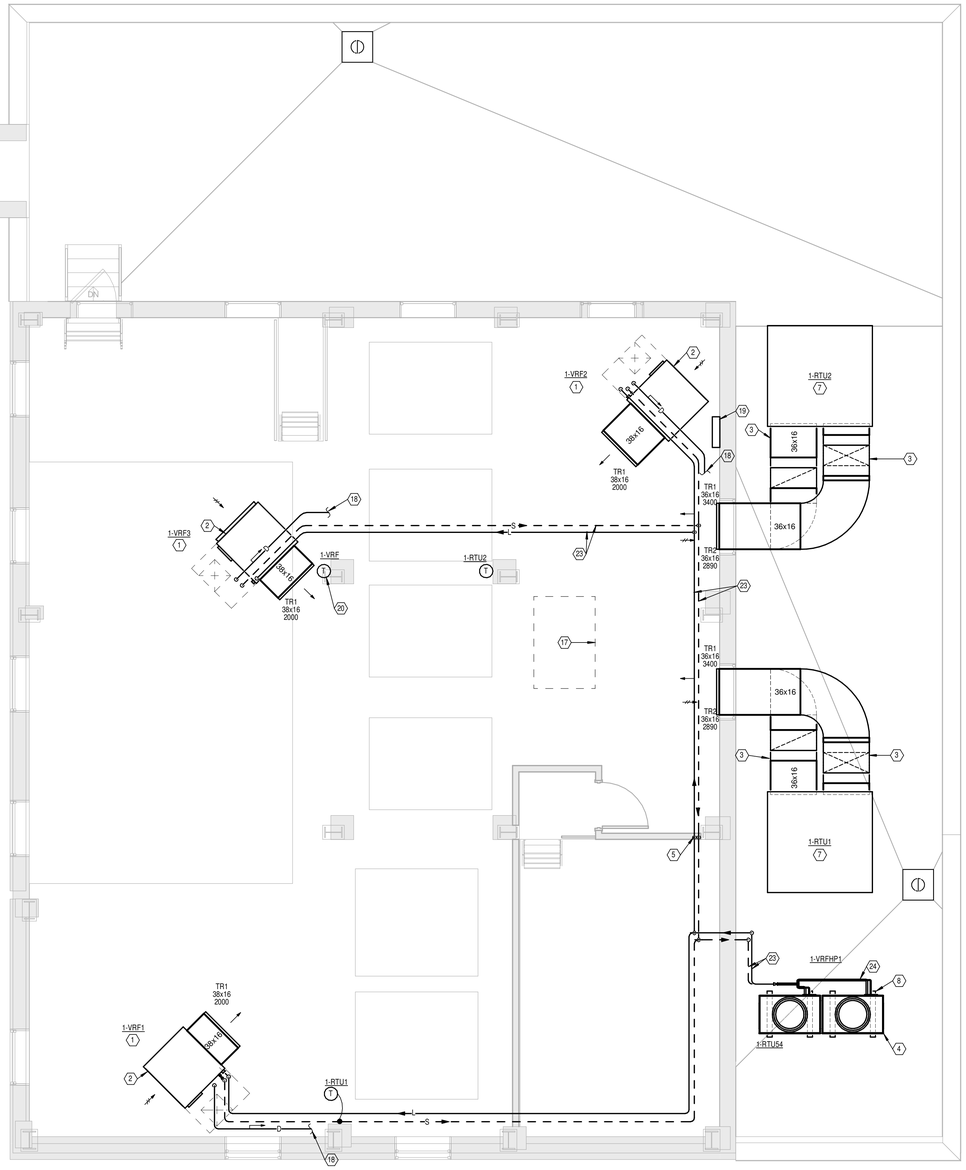
Department of Veterans Affairs



N 2 TENTH FLOOR PLAN - NEW WORK

Scale: 1/8" = 1'-0"



N 1 ELEVENTH FLOOR PLAN - NEW WORK

Scale: 1/4" = 1'-0"

GENERAL NOTES

A REFER TO SHEET M001 FOR LEGEND, ABBREVIATIONS, AND ADDITIONAL GENERAL NOTES.

B INCLUDE ALL WORK NECESSARY TO ACCOMMODATE PHASING. REFER TO ARCHITECTURAL SHEET G002 AND GENERAL REQUIREMENTS SECTION 01 00 00.

C PROVIDE TEMPORARY COOLING AS REQUIRED TO KEEP ELEVATOR PENTHOUSE CONDITIONED DURING CONSTRUCTION.

D ELEVENTH FLOOR ROOF HAS LIMITED ACCESS. COORDINATE EQUIPMENT DELIVERY WITH PROJECT ENGINEER PRIOR TO BIDDING.

PLAN NOTES

1 SUSPEND VRF FAN COIL FROM STRUCTURE WITH SPRING ISOLATION HANGER RODS.

2 PROVIDE 20-MESH SCREEN OVER RETURN AIR OPENING.

3 PROVIDE ALUMINUM JACKETING OVER EXTERNAL DUCT INSULATION ON SUPPLY AND RETURN DUCTWORK PER SPECIFICATION SECTION 23 07 11. SEAL WATER TIGHT.

4 PROVIDE EQUIPMENT SUPPORT ROOF CURBS UNDER EQUIPMENT.

5 DROP REFRIGERANT PIPING DOWN TO FLOOR BELOW. REFER TO TENTH FLOOR PARTIAL PLAN ON THIS SHEET FOR CONTINUATION.

6 RISE REFRIGERANT PIPING UP TO FLOOR ABOVE. REFER TO ELEVENTH FLOOR PARTIAL PLAN ON THIS SHEET FOR CONTINUATION.

7 PROVIDE FULL PERIMETER ROOF CURB CAPABLE OF HORIZONTAL DISCHARGE. COORDINATE ALL ROOFING WORK REQUIRED.

8 PROVIDE EQUIPMENT ROOF SUPPORT CURB PER DETAIL ON SHEET M502. SECURE UNIT TO WITHSTAND EXPECTED WIND LOADING.

9 DROP 6" D SUPPLY AIR DUCT DOWN TO WITHIN 4" OF TOP OF VFD. PROVIDE 20-MESH SCREEN OVER BRANCH DUCT OUTLET. BALANCE OUTLETS TO 60 CFM EACH.

10 EXISTING ATC CABINET TO REMAIN.

11 EXISTING ELECTRICAL EQUIPMENT TO REMAIN.

12 EXISTING AIR STORAGE TANK TO REMAIN.

13 EXISTING AIR COMPRESSOR TO REMAIN.

14 EXISTING AIR DRYER TO REMAIN.

15 INSTALL NEW DUCTWORK WHEN ACCESS HATCH/HOISTWAY IS NOT IN USE FOR EQUIPMENT INSTALLATION/REMOVAL.

16 COORDINATE CONTROL CONDUIT LOCATIONS WITH NEW WALL INSTALLATION.

17 4' X 6' ACCESS HATCH FROM 9TH FLOOR ELEVATOR LOBBY TO 11TH FLOOR PENTHOUSE.

18 EXTEND DRAIN PIPE TO NEAREST FLOOR DRAIN.

19 PROVIDE NEW DDC BUILDING CONTROLLER. REFER TO SPECIFICATION SECTION 23 09 23 FOR MORE INFORMATION. PROVIDE FULL INTEGRATION INTO E.C.C.

20 PROVIDE (1) THERMOSTAT TO CONTROL (3) VRF FAN COIL UNITS. UNITS SHALL BE STAGED ON/OFF TO MEET ROOM SETPOINT.

21 PNEUMATIC TUBE.

22 PROVIDE CAPPED, 6" D CONICAL TAP FITTING WITH LOCKABLE MANUAL BALANCING DAMPER. SEAL CAP AIR TIGHT AND INSULATE CAP, FITTING, ETC.

23 SIZE AND INSULATE REFRIGERANT PIPING PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE PIPING SCHEMATIC FOR REVIEW WITH SHOP DRAWINGS SUBMITTAL.

24 PROVIDE TWINNING KIT AND ALL OTHER REFRIGERATION SPECIALTIES PER MANUFACTURER'S RECOMMENDATIONS.

Revisions	Date

CONSULTANTS:

Heapy Engineering
Mechanical Electrical Commissioning Technology
Nationally Recognized Leader in Sustainability / LEED
1400 W Dorothy Lane, Dayton OH 45409-1310
Ph: 937-224-0861 Fax: 937-224-5777 www.heapy.com
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JOHN POE ARCHITECTS
116 EAST THIRD STREET
DAYTON, OHIO 45402-2130
937 461 3290 PHONE
937 461 0260 FAX
jpa@johnpoe.com

Drawing Title
TENTH AND ELEVENTH FLOOR PLANS - NEW WORK

Approved: Project Director

Project Title
Upgrade Elevators, Pneumatic Tubes and Dumbwaiter

Location
Cininnati, Ohio

Date 12/17/2012 | Checked DLE | Drawn PCW

Project No.
VA Project No. 539-13-101
JPA Project No. 12008.00

Building Number 1

Drawing Number 1-MH102

Dwg. of

Office of Construction and Facilities Management
Department of Veterans Affairs

GENERAL NOTES

A REFER TO SHEET M001 FOR LEGEND, ABBREVIATIONS, AND ADDITIONAL GENERAL NOTES.

B THE WORK ASSOCIATED WITH BUILDING 8 ELEVATOR MACHINE ROOM IS PART OF DEDUCT ALTERNATE #1.

PLAN NOTES

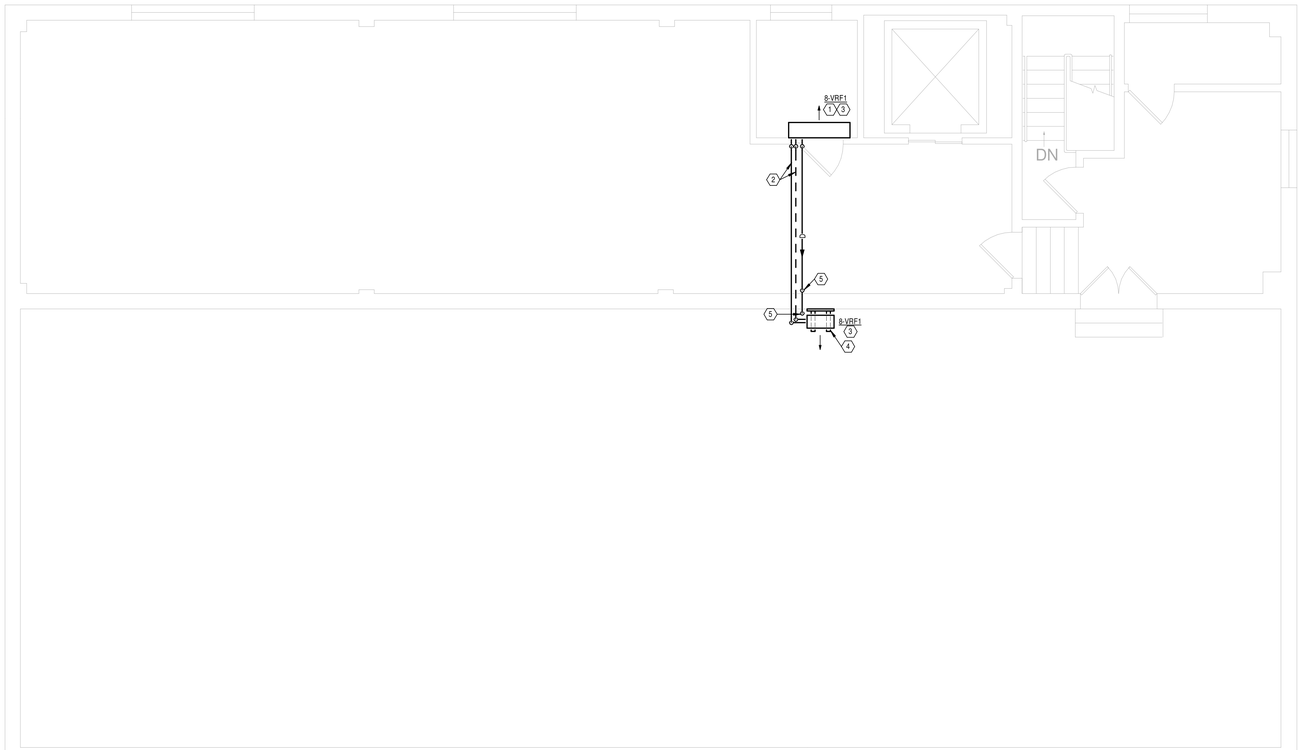
1 SUSPEND WALL MOUNTED UNIT ABOVE DOOR.

2 RACK REFRIGERANT PIPING ON WALL.

3 INTEGRATE ALL MONITORING AND CONTROL FUNCTIONS AVAILABLE FROM SPLIT SYSTEM INTO E.C.C.

4 PROVIDE ANGLE IRON SUPPORT FRAME TO MOUNT 8-VRFHP1 ON WALL APPROXIMATELY 4'-0" ABOVE ROOF. COORDINATE EXACT MOUNTING HEIGHT WITH COTR. PRIME AND PAINT FRAME.

5 DROP DRAIN PIPING DOWN TO 12" AFF. PENETRATE EXTERIOR WALL AND TURN DOWN AT 90°. TERMINATE AT SPLASH BLOCK.



DEDUCT ALTERNATE #1

N 1 FOURTH FLOOR PARTIAL PLAN (BLDG. 8) - NEW WORK

Scale: 1/4" = 1'-0"

Revisions	Date

CONSULTANTS:

Heapy Engineering
Mechanical Electrical Commissioning Technology
Nationally Recognized Leader in Sustainability / LEED
1400 W Dorothy Lane, Dayton OH 45409-1310
Ph: 937-224-0861 Fax: 937-224-5777 www.heapy.com
HEAPY PROJECT No.:2012-04004 FIRM LICENSE No.:01528

STATE OF OHIO · JOHN A. BLACK 49341 · REGISTERED PROFESSIONAL ENGINEER

ARCHITECT/ENGINEERS:

JOHN POE ARCHITECTS
116 EAST THIRD STREET
DAYTON, OHIO 45402-2130
937 461 3290 PHONE
937 461 0260 FAX
joa@johnpoe.com

Drawing Title: FOURTH FLOOR PARTIAL PLAN - NEW WORK

Approved: Project Director

Project Title: Upgrade Elevators, Pneumatic Tubes and Dumbwaiter

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Date: 12/17/2012 | Checked: DLE | Drawn: PCW

Project No.
VA Project No. 539-13-101
JPA Project No. 12008.00

Building Number: 8

Drawing Number: 8-MH101

Dwg. of

Office of Construction and Facilities Management

Department of Veterans Affairs

AV SYMBOLS WITH ELECTRICAL REQUIREMENTS

(S)	HORN TYPE PAGING/INTERCOM SYSTEM SPEAKER (90" MH UNLESS NOTED OTHERWISE). 1-GANG BOX WITH 0.75" CONDUIT TO ABOVE ACCESSIBLE CEILING.
(SC)	CEILING MOUNTED PAGING/INTERCOM SYSTEM SPEAKER, INSTALLATION AND CABLING.
(V)	PAGING/INTERCOM SYSTEM WALL MOUNTED SPEAKER VOLUME CONTROLLER (46" MH UNLESS NOTED OTHERWISE). 1-GANG BOX AND 0.75" CONDUIT TO ABOVE ACCESSIBLE CEILING.
(PS) E	CEILING MOUNTED MANUAL PROJECTION SCREEN. 1-GANG BOX WITH 1" CONDUIT TO ABOVE ACCESSIBLE CEILING. PROVIDE SCREEN AND LOW VOLTAGE CONTROL.

SECURITY SYMBOLS WITH ELECTRICAL REQUIREMENTS

(GR)	ROUGH-IN FOR WALL MOUNTED PROXIMITY CARD READER (46" MH UNLESS NOTED OTHERWISE). 1-GANG BOX WITH CONDUIT TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING. REFER TO SECURITY ROUGH-IN DETAILS.
(DM)	ROUGH-IN FOR DOOR POSITION SWITCH. CONDUIT PATHWAYS FROM DOOR FRAME TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING. REFER TO SECURITY ROUGH-IN DETAILS.
(EL)	ROUGH-IN FOR ELECTRONIC DOOR LOCK. CONDUIT PATHWAYS FROM DOOR FRAME TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING. REFER TO SECURITY ROUGH-IN DETAILS.
(ES)	ROUGH-IN FOR ELECTRONIC STRIKE. CONDUIT PATHWAYS FROM DOOR FRAME TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING. REFER TO SECURITY ROUGH-IN DETAILS.
(HA)	ROUGH-IN FOR WALL/PEDESTAL MOUNT HANDICAP DOOR ACTUATOR BUTTON, FURNISHED BY OTHERS. BOX AS REQUIRED BY SYSTEM MANUFACTURER WITH INSTALLATION AND CONDUIT TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING.
(HD)	HANDICAP DOOR OPERATOR MOTOR ASSEMBLY BY OTHERS. 120V POWER CONNECTION AND CONDUIT FROM DOOR FRAME TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING.
(PP) W	WALL MOUNTED WIRELESS PANIC/DURESS BUTTON (46" MH UNLESS NOTED OTHERWISE) #EN1235SF.
(RX)	ROUGH-IN FOR REQUEST TO EXIT SWITCH IN DOOR HARDWARE. CONDUIT PATHWAYS FROM DOOR FRAME TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING. REFER TO SECURITY ROUGH-IN DETAILS.
(RX) M	ROUGH-IN FOR REQUEST TO EXIT WALL MOUNT MOUNT PIR ABOVE DOOR, 1 GANG BOX WITH 0.75"C. TO SMS JUNCTION BOX. REFER TO SECURITY ROUGH-IN DETAILS.
(JS)	SECURITY SYSTEM JUNCTION BOX TO BE LOCATED ABOVE ACCESSIBLE CEILING (MIN 6"X6"X4"). ROUTE LOCAL DOOR CONTROL CONDUITS WITH WIRING TO JUNCTION BOX. SEND 1" CONDUIT WITH DOOR SECURITY WIRING TO LOCAL 2-DOOR CONTROLLER/REMOTE DOOR CONTROL PANELS AS INDICATED ON DRAWINGS. REFER TO DOOR ROUGH-IN DETAILS.

ELECTRICAL GENERAL NOTES

A. THESE NOTES APPLY EQUALLY TO THE FULL SET OF DOCUMENTS.

B. SITE VISIT(S) SHALL BE AS OUTLINED IN PROJECT SPECIFICATIONS.

C. INCLUDE ALL WORK NECESSARY TO ACCOMMODATE PHASING. REFER TO ARCHITECTURAL DRAWINGS AND GENERAL REQUIREMENTS SECTION 01 00 00.

D. THE CONTRACTORS SHALL REFER TO ALL SPECIFICATION SECTIONS AND THESE DRAWINGS FOR DETAILS OF BUILDING CONSTRUCTION TO ENSURE SPACE AND SATISFACTORY ARRANGEMENT FOR THEIR WORK. THE VARIOUS DRAWINGS COMPRISING THE SET ARE INTERDEPENDENT AND MUST BE USED JOINTLY AT ALL TIMES. EACH CONTRACTOR SHALL REFER TO THE GENERAL REQUIREMENTS OF THE CONTRACT. THE NOTES AND SYMBOLS INDICATED ON THE DRAWINGS ARE FOR THE GUIDANCE OF ALL TRADES INVOLVED IN THE PROJECT AND MUST BE FOLLOWED TO EXECUTE THE WORK AS INTENDED. IF DISCREPANCIES OCCUR, CONTACT THE COTR THRU THE CONTRACTING OFFICER FOR CLARIFICATION BEFORE PROCEEDING.

E. ALL WORK MUST BE COORDINATED WITH THE CONTRACTING OFFICER AND PROJECT ENGINEER TO MAINTAIN OPERATION OF THE EXISTING FACILITY.

F. ALL WORK SHALL BE PERFORMED IN COMPLETE COMPLIANCE WITH ALL CURRENT GOVERNING CODES AND STANDARDS.

G. EXISTING CONDITIONS SHOWN HAVE BEEN BASED UPON AVAILABLE DRAWING INFORMATION, AND MAY BE AT VARIANCE WITH ACTUAL WORK IN PLACE. THE CONTRACTOR SHALL TAKE ALL NECESSARY FIELD MEASUREMENTS AND FIELD VERIFY ALL CONDITIONS AFFECTING THE EXECUTION OF THE WORK. ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THE WORK SHOWN ON THE CONTRACT DOCUMENTS WHICH MAY IMPACT THE PROGRESS OF THE WORK SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTING OFFICER IN WRITING FOR RESOLUTION BEFORE PROCEEDING WITH THE WORK.

H. ALL PENETRATIONS THROUGH FIRE-RATED ASSEMBLIES SHALL BE PROTECTED AND/OR FIRE-STOPPED AS REQUIRED TO MAINTAIN FIRE-RATINGS INDICATED. COORDINATE WITH ALL TRADES TO ENSURE FIRE-RATED PENETRATION REQUIREMENTS AND DETAILS ARE MET.

I. ANNULAR SPACE OF ALL PIPE, CONDUIT, DUCT & OTHER SIMILAR PENETRATIONS OF FIRE RATED ASSEMBLIES SHALL BE FIRESTOPPED. IN ADDITION, PENETRATIONS THROUGH 0-HOUR RATED WALLS & FLOORS SHALL BE FIRESTOPPED TO RETARD PASSAGE OF FIRE & SMOKE.

J. ALL CONDUITS IN FINISHED ROOMS, CORRIDORS, ETC. SHALL BE CONCEALED IN A WALL OR ABOVE CEILING.

K. ACCESS PANELS IN NON ACCESSIBLE CEILINGS SHALL BE PROVIDED FOR ALL ELECTRICAL ITEMS REQUIRING ACCESS.

L. ALL CUTTING AND PATCHING REQUIRED FOR THIS PROJECT SHALL BE INCLUDED IN THE CONTRACT. REFINISH ANY SURFACE DISTURBED UNDER THIS WORK TO MATCH EXISTING.

M. ANY REMOVED EQUIPMENT SHALL BE TURNED OVER TO THE VA. ITEMS NOT DESIRED BY THE VA SHALL BE REMOVED FROM THE PREMISES AND DISPOSED OF PROPERLY BY THE CONTRACTOR.

N. THE CONTRACT DRAWINGS ARE NOT INTENDED TO SHOW EVERY VERTICAL OR HORIZONTAL OFFSET WHICH MAY BE NECESSARY TO COMPLETE THE SYSTEMS. COORDINATE WORK IN ADVANCE WITH ALL OTHER TRADES AND REPORT IMMEDIATELY AND DIFFICULTIES WHICH CAN BE ANTICIPATED.

O. ALL ABANDONED EXTRANEOUS CONDUITS, WIRING, DEVICES, ETC. SHALL BE REMOVED.

P. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION CONCERNING MECHANICAL EQUIPMENT THAT REQUIRES ELECTRICAL CONNECTIONS.

STATEMENT OF BID ITEM(S):
A ITEM 1 - BASE BID. ALL WORK SPECIFIED OR SHOWN IN THE BID DOCUMENTS.
B ITEM 2 - DEDUCT ALTERNATE E-1. INCLUDES ALL ITEMS INDICATED IN ITEM 1 LESS WORK ASSOCIATED WITH BUILDING 1 DUMBWAITER, BUILDING 1 PNEUMATIC TUBE STATIONS ON SEVENTH AND EIGHTH FLOORS AND ALL WORK ASSOCIATED WITH BUILDING 8.
C ITEM 3 - DEDUCT ALTERNATE E-2. INCLUDES ALL ITEMS INDICATED IN ITEM 2 LESS WORK ASSOCIATED WITH REMAINING BUILDING 1 PNEUMATIC TUBE STATIONS INCLUDING NEW PNEUMATIC TUBE DIVERTER STATIONS.

ELECTRICAL SYMBOLS

3 $	DASH SYMBOL INDICATES PARTICULAR OUTLET OR DEVICE TO BE REMOVED AND CIRCUITRY MADE CONTINUOUS WHERE REQUIRED.
3 $	EXISTING OUTLET OR DEVICE TO REMAIN. MAINTAIN EXISTING CIRCUITING.
	ELECTRICAL CONNECTION.
	20A-125V DUPLEX RECEPTACLE, NEMA 5-20R (18" MH UNLESS NOTED OTHERWISE).
	20A-125V SINGLE RECEPTACLE, NEMA 5-20R (18" MH UNLESS NOTED OTHERWISE).
	SPECIAL PURPOSE RECEPTACLE. REFER TO NOTE ON PLAN.
	20A-125V DOUBLE DUPLEX RECEPTACLE. NEMA 5-20R, (18" MH UNLESS NOTED OTHERWISE) TWO GANG ASSEMBLY.
	20A-125V DUPLEX RECEPTACLE, NEMA 5-20R WITH BOTTOM OUTLET CONTROLLED BY WALL SWITCH. (18" MH UNLESS NOTED OTHERWISE).
	20A-125V DUPLEX RECEPTACLE, NEMA 5-20R (46" MH UNLESS NOTED OTHERWISE).
GF	20A-125V DUPLEX RECEPTACLE, NEMA 5-20R, WITH GROUND FAULT CIRCUIT INTERRUPTER (18" MH UNLESS NOTED OTHERWISE).
WP	20A-125V WEATHERPROOF DUPLEX RECEPTACLE, NEMA 5-20R (HORIZONTAL 18" MH UNLESS NOTED OTHERWISE) WITH WHETHERPROOF COTER.
WP/GF	20A-125V WEATHERPROOF DUPLEX RECEPTACLE, NEMA 5-20R WITH GROUND FAULT CIRCUIT INTERRUPTER (18" MH UNLESS NOTED OTHERWISE), WITH WHEATERPROOF COTER.
EM	20A-125V DUPLEX RECEPTACLE, NEMA 5-20R, ON EMERGENCY POWER (18" MH UNLESS NOTED OTHERWISE).
T	20A-125V POWERLOCK GROUNDING TYPE RECEPTACLE, HOSPITAL USE (66" MH UNLESS NOTED OTHERWISE).
	20A-125V DUPLEX PEDESTAL TYPE FLOOR RECEPTACLE, NEMA 5-20R, PROVIDE CARPET FLANGE WHERE REQUIRED.
	20A-125V DUPLEX RECEPTACLE, NEMA 5-20R, IN FLUSH FLOOR BOX WITH ROUND COVERPLATE. PROVIDE CARPET FLANGE WHERE REQUIRED.
IG	20-125V DUPLEX RECEPTACLE, NEMA 5-20R, WITH ISOLATED GROUND (18" MH UNLESS NOTED OTHERWISE).
20A	20A-125/250V-1PH-4W SINGLE RECEPTACLE, NEMA 14-20R (18" MH UNLESS NOTED OTHERWISE).
30A	30A-125/250V-1PH-4W SINGLE RECEPTACLE, NEMA 14-30R (18" MH UNLESS NOTED OTHERWISE).
50A	50A-125/250V-1PH-4W SINGLE RECEPTACLE, NEMA 14-50R (18" MH UNLESS NOTED OTHERWISE).
20A	20A-250V-3PH-4W SINGLE RECEPTACLE, NEMA 15-20R (18" MH UNLESS NOTED OTHERWISE).
30A	30A-250V-3PH-4W SINGLE RECEPTACLE, NEMA 15-30R (18" MH UNLESS NOTED OTHERWISE).
50A	50A-250V-3PH-4W SINGLE RECEPTACLE, NEMA 15-50R (18" MH UNLESS NOTED OTHERWISE).
J	JUNCTION BOX.
	MULTI-OUTLET RECEPTACLES ASSEMBLY, NEMA 5-15R (SINGLE OUTLETS ON 18" CENTERS) (46" MH UNLESS NOTED OTHERWISE).
C	CLOCK HANGER OUTLET, SINGLE NEMA 5-15R RECESSED IN COVER PLATE (84" MH UNLESS NOTED OTHERWISE).
$	SINGLE POLE SWITCH (46" MH UNLESS NOTED OTHERWISE).
2 $	TWO POLE WALL SWITCH (46" MH UNLESS NOTED OTHERWISE).
3 $	THREE-WAY WALL SWITCH (46" MH UNLESS NOTED OTHERWISE).
4 $	FOUR-WAY WALL SWITCH (46" MH UNLESS NOTED OTHERWISE).
P $	SWITCH WITH NEON PILOT LIGHT. ONE-GANG ASSEMBLY (46" MH UNLESS NOTED OTHERWISE).
K $	KEY OPERATED WALL SWITCH (46" MH UNLESS NOTED OTHERWISE).
DM $	LIGHTING DIMMER SWITCH (46" MH UNLESS NOTED OTHERWISE) 1000 WATTS UNLESS OTHERWISE INDICATED.
R $	SWITCH WITH RECEPTACLE (46" MH UNLESS NOTED OTHERWISE) STANDARD TWO-GANG ASSEMBLY OF SWITCH AND RECEPTACLE.
M $	FLUSH FRACTIONAL HORSEPOWER MOTOR STARTER WITH NEON PILOT LIGHT. ONE-GANG ASSEMBLY (46" MH UNLESS NOTED OTHERWISE).
H $	HP RATED WALL SWITCH (46" MH UNLESS NOTED OTHERWISE).
	ELECTRICAL PANEL OR SWITCHBOARD PER DRAWINGS.
P/B	PULL BOX.
	DISCONNECT SWITCH.
	MOTOR STARTER.
J	COMBINATION MOTOR STARTER AND DISCONNECT SWITCH.
	ELECTRIC MOTOR.
UH	UNIT HEATER.
FC	FAN COIL.
AC	AIR CONDITIONER.
CU	CONDENSING UNIT.
UV	UNIT VENTILATOR.
CR	CORD REEL.
PP	POWER POLE.
T	LINE VOLTAGE THERMOSTAT.
DH	DUCT HEATER.
EB	ELECTRIC BASEBOARD HEATER.
M	INTERCOM SYSTEM DESK MOUNTED MASTER CONTROL STATION. SUBSCRIPT "W" INDICATES WALL MOUNT (46" MH UNLESS NOTED OTHERWISE).
I	INTERCOM STAFF STATION (46" MH UNLESS NOTED OTHERWISE).
H	INTERCOM HORN TYPE SPEAKER (84" MH UNLESS NOTED OTHERWISE).
S	INTERCOM SPEAKER FLUSH MOUNT IN CEILING.
	PUSHBUTTON (46" MH UNLESS NOTED OTHERWISE).
	BUZZER (90" MH UNLESS NOTED OTHERWISE).
	4" DIAMETER (90" MH UNLESS NOTED OTHERWISE).
PC	PHOTOELECTRIC SENSOR.
LC	LIGHTING CONTACTOR.
OS	CEILING MOUNTED OCCUPANCY SENSOR.
OS	WALL MOUNTED OCCUPANCY SENSOR.
DS	CEILING MOUNTED DAYLIGHT SENSOR.
OP	OCCUPANCY SENSOR POWER PACK.

FIRE ALARM SYMBOLS

FACP	FIRE ALARM CONTROL PANEL.
15 F H	FIRE ALARM SPEAKER & SIGNAL LIGHT (80" AFF). (# WHEN SHOWN INDICATES CANDELA RATING OF STROBE. WHEN A # IS NOT SHOWN, THE STROBE SHALL BE RATED 75 CANDELA.
15 F	FIRE ALARM BELL & SIGNAL LIGHT (80" AFF). (# WHEN SHOWN INDICATES CANDELA RATING OF STROBE. WHEN A # IS NOT SHOWN, THE STROBE SHALL BE RATED 75 CANDELA.
15 F	FIRE ALARM CHIME & SIGNAL LIGHT (80" AFF). (# WHEN SHOWN INDICATES CANDELA RATING OF STROBE. WHEN A # IS NOT SHOWN, THE STROBE SHALL BE RATED 75 CANDELA.
15 F	FIRE ALARM HORN & SIGNAL LIGHT (80" AFF). (# WHEN SHOWN INDICATES CANDELA RATING OF STROBE. WHEN A # IS NOT SHOWN, THE STROBE SHALL BE RATED 75 CANDELA.
15	FIRE ALARM SIGNALING LIGHT (80" AFF). (# WHEN SHOWN INDICATES CANDELA RATING OF STROBE. WHEN A # IS NOT SHOWN, THE STROBE SHALL BE RATED 75 CANDELA.
(S) F	CEILING MOUNTED FIRE ALARM SPEAKER.
F K	FIRE ALARM MANUAL STATION (46" MH UNLESS NOTED OTHERWISE). SUBSCRIPT "K" INDICATES KEY OPERATED.
(S)	CEILING MOUNTED SMOKE DETECTOR.
(H)	CEILING MOUNTED HEAT DETECTOR.
(S) S/R	DUCT MOUNTED SMOKE DETECTOR. SUBSCRIPT "S" INDICATES SUPPLY. SUBSCRIPT "R" INDICATES RETURN.
(H) S/R	DUCT MOUNTED HEAT DETECTOR. SUBSCRIPT "S" INDICATES SUPPLY. SUBSCRIPT "R" INDICATES RETURN.
C	ELECTRIC RELEASE DOOR CLOSER.
D	ELECTRO-MAGNETIC DOOR HOLDER.
FS	WATER FLOW SWITCH.
V	VALVE SUPERVISORY SWITCH.
W H	DUCT MOUNTED DETECTOR REMOTE TEST STATION AND ALARM INDICATOR LIGHT. SUBSCRIPT "W" INDICATES WALL MOUNTED.
SD	SMOKE DAMPER.
FT	FIRE FIGHTER'S TELEPHONE (60" MH UNLESS NOTED OTHERWISE).
PS	PRESSURE SWITCH.
AM C/I	ADDRESSABLE MODULE. SUBSCRIPT "I" INDICATES INPUT. SUBSCRIPT "C" INDICATES CONTROL.
PIV	POST INDICATOR VALVE.

LUMINAIRE SYMBOLS

A a	LIGHTING FIXTURE. CAPITAL LETTER DENOTES FIXTURE TYPE, LOWER CASE LETTER DENOTES SWITCHING ARRANGEMENT.
	LIGHTING FIXTURE ON NIGHT LIGHT OR EMERGENCY CIRCUIT.
	EXIT LIGHTING FIXTURE, ARROWS AS INDICATED.

NURSE CALL SYMBOLS

NCCP	NURSE CALL CONTROL PANEL.
W NM	NURSE CALL DESK MOUNTED MASTER CONTROL STATION (OUTLET AT 18" MH UNLESS NOTED OTHERWISE). SUBSCRIPT "W" INDICATES WALL MOUNT (46" MH UNLESS NOTED OTHERWISE).
NS	NURSE CALL STAFF STATION (46" MH UNLESS NOTED OTHERWISE).
ND	NURSE CALL DUTY STATION (46" MH UNLESS NOTED OTHERWISE).
N T	NURSE CALL STATION WITH PULL CORD FOR PATIENT USE (33" MH IN TOILET ROOMS, 90" M.H. IN SHOWERS AND WET AREAS, 46" MH UNLESS NOTED OTHERWISE IN ALL OTHER AREAS).
NC	PATIENT NURSE CALL UTILITY CONSOLE (46" MH UNLESS NOTED OTHERWISE).
N	PATIENT NURSE CALL STATION (ONE OR TWO CORDS AS INDICATED, 46" MH UNLESS NOTED OTHERWISE).
	CEILING MOUNTED NURSE CALL DOME LIGHT.
H	WALL MOUNTED NURSE CALL DOME LIGHT (90" MH UNLESS NOTED OTHERWISE).
B	CEILING MOUNTED COMBINATION DOME LIGHT AND BUZZER.
Z	CEILING MOUNTED NURSE CALL ZONE LIGHT.
E N	NURSE CALL EMERGENCY BUTTON (46" MH UNLESS NOTED OTHERWISE).
B N	EMERGENCY CODE BLUE BUTTON (46" MH UNLESS NOTED OTHERWISE).

TECHNOLOGY SYMBOLS WITH ELECTRICAL REQUIREMENTS

	CONDUIT SLEEVE / FIRE RATED SLEEVE ASSEMBLY THRU WALL (1-2" SLEEVE UNLESS NOTED OTHERWISE).
D	WALL MOUNTED QUADRUPLEX (2-VOICE/2-DATA) VOICE/DATA OUTLET (18" MH UNLESS NOTED OTHERWISE).
T	WALL MOUNTED PHONE OUTLET (46" MH UNLESS NOTED OTHERWISE).
TV X	WALL MOUNTED CATV OUTLET (44" MH UNLESS NOTED OTHERWISE). SUBSCRIPT "X" INDICATES ALTERNATE CONFIGURATION.
X	TECHNOLOGY FLOOR BOX. PROVIDE APPROPRIATE CONNECTOR PLATE AND HINGED COVER. "#" INDICATES OUTLET TYPE. SUBSCRIPT "X" INDICATES ALTERNATE CONFIGURATION.
AP	ABOVE CEILING WAP OUTLET, 1 - DATA ONLY.

NOTE: ALL SYMBOLS AND ABBREVIATIONS ARE SUBJECT TO MODIFICATIONS ON OTHER DRAWINGS.

ALL SYMBOLS OR ABBREVIATIONS MIGHT NOT NECESSARILY BE USED ON THIS PROJECT.

ABBREVIATIONS

AAP	- AREA ALARM PANEL - MEDICAL GAS	ID	- INSIDE DIAMETER
CC	- ACCESS	IN	- INCHES
ADJ	- ADJUSTABLE	KEC	- KITCHEN EQUIPMENT CONTRACTOR
AF	- ARC FAULT CIRCUIT INTERUPTER		
AFCI	- ARC FAULT CIRCUIT INTERUPTER	L	- LENGTH
AFF	- ABOVE FINISHED FLOOR TO BOTTOM OF ITEM	LBS	- POUNDS
AFG	- ABOVE FINISHED GRADE TO BOTTOM OF ITEM		
ALT	- ALTERNATE	MAP	- MASTER ALARM PANEL (MEDICAL GAS)
AP	- ACCESS PANEL	MAX	- MAXIMUM
APPROX	- APPROXIMATE	MEZZ	- MEZZANINE
ARCH	- ARCHITECT OR ARCHITECTURAL	MFR	- MANUFACTURER
ASSY	- ASSEMBLY	MH	- MANHOLE OR MOUNTING HEIGHT TO CENTER LINE OF ITEM
ATS	- AUTOMATIC TRANSFER SWITCH	MIN	- MINIMUM OR MINUTE
		MISC	- MISCELLANEOUS
BLDG	- BUILDING	MTD	- MOUNTED
BOE	- BOTTOM OF EQUIPMENT	MTG	- MOUNTING
BOT	- BOTTOM		
BTWN	- BETWEEN	NIC	- NOT IN CONTRACT
		NOM	- NOMINAL
CFCI	- CONTRACTOR FURNISHED CONTRACTOR INSTALLED	NTS	- NOT TO SCALE
CKT	- CIRCUIT		
CLG	- CEILING	OD	- OUTSIDE DIAMETER
CMU	- CONCRETE MASONRY UNIT	OFCI	- OWNER FURNISHED CONTRACTOR INSTALLED
CONN	- CONNECT OR CONNECTION	OFOI	- OWNER FURNISHED OWNER INSTALLED
CONTR	- CONTRACTOR		
CORR	- CORRIDOR	PC	- PLUMBING CONTRACTOR (DIVISION 22)
COTR	- CONTRACTING OFFICER'S TECHNICAL REPRESENTATIVE	PLBG	- PLUMBING
CTR	- CENTER		
		RAD	- RADIUS
D	- DEPTH	REC	- RECESSED
DET	- DETAIL	REQD	- REQUIRED
DIA	- DIAMETER	RI	- ROUGH-IN
DIM	- DIMENSION		
DIV	- DIVISION	S	- SURFACE MOUNTED
DN	- DOWN	SC	- SECURITY CONTRACTOR
DWG	- DRAWING	SCH	- SCHEDULE
		SHT	- SHEET
EA	- EACH	SMS	- SECURITY MANAGEMENT SYSTEM
EC	- ELECTRICAL CONTRACTOR (DIVISION 26)	SPEC	- SPECIFICATIONS
EJ	- EXPANSION JOINT	SQ	- SQUARE
ELEC	- ELECTRICAL	SS	- STAINLESS STEEL
ELEV	- ELEVATION OR ELEVATOR	STD	- STANDARD
EM	- EMERGENCY	STRUC	- STRUCTURAL OR STRUCTURE
EQ	- EQUAL	SUC	- SITE UTILITY CONTRACTOR
EQS	- EQUIPMENT SUPPLIER		
EQUIP	- EQUIPMENT	TC	- TECHNOLOGY CONTRACTOR
ETR	- EXISTING TO REMAIN	TEMP	- TEMPERATURE
EX	- EXISTING	TOE	- TOP OF EQUIPMENT
EXP	- EXPANSION	TYP	- TYPICAL
EXT	- EXTERIOR		
EXR	- EXISTING TO BE REMOVED AND RELOCATED	UNO	- UNLESS NOTED OTHERWISE
FCE	- FIRE CONTROL EQUIPMENT		
FF	- FINISHED FLOOR ELEVATION	VFD	- VARIABLE FREQUENCY DRIVE
FLR	- FLOOR	VOL	- VOLUME
FSC	- FIRE SUPPRESSION CONTRACTOR (DIVISION 21)		
FT	- FEET	W/	- WITH
FTG	- FOOTING	W/O	- WITHOUT
		WP	- WEATHERPROOF
GC	- GENERAL CONTRACTOR		
GF	- GROUND FAULT CIRCUIT INTERRUPTER	ZVC	- ZONE VALVE CABINET
GFCI	- GROUND FAULT CIRCUIT INTERRUPTER OR GOVERNMENT FURNISHED CONTRACTOR INSTALLED		
GFFT	- GROUND FAULT FEED THRU		
HC	- HVAC CONTRACTOR (DIVISION 23)		
HP	- HORSE POWER OR HIGH POINT		
HVAC	- HEATING, VENTILATING, AND AIR CONDITIONING		

GENERAL FLOOR PLAN NOTES

B E2	DETAIL: B = DETAIL DESIGNATION; E2 = SHEET WHERE DETAIL IS LOCATED
1 E2	SECTION: 1 = SECTION DESIGNATION; E2 = SHEET WHERE DETAIL IS LOCATED
3	PLAN NOTE. APPLIES ONLY TO THE SHEET WHICH IT IS SHOWN.
3	DETAIL NOTE. APPLIES ONLY TO THE ASSOCIATED DETAIL.
	CABLE TRAY, 12" x 4" DEEP UNLESS NOTED OTHERWISE.
	WIRE & CONDUIT IN WALL OR ABOVE CEILING.
	WIRE & CONDUIT IN OR BELOW SLAB OR GRADE.
	CONDUIT TO BE REMOVED.
E	EXISTING WIRE & CONDUIT TO REMAIN.
DAT	CONDUIT FOR DATA CIRCUITRY.
EM	WIRE & CONDUIT FOR EMERGENCY CIRCUITRY.
FA	WIRE & CONDUIT FOR FIRE ALARM CIRCUITRY.
I	WIRE & CONDUIT FOR INTERCOM SYSTEM CIRCUITRY.
NC	WIRE & CONDUIT FOR NURSE CALL CIRCUITRY.
NL	WIRE & CONDUIT FOR NIGHT LIGHT CIRCUITRY.
PHO	CONDUIT FOR PHONE CIRCUITRY.
S	WIRE & CONDUIT FOR SOUND SYSTEM CIRCUITRY.
SEC	WIRE & CONDUIT FOR SECURITY SYSTEM CIRCUITRY.
TV	WIRE & CONDUIT FOR TELEVISION SYSTEM CIRCUITRY.
W	WIRE RUN IN SURFACE WIREWAY.
CM	CABLE MANAGEMENT SYSTEM PATHWAY.
X - 1,2	EACH ARROWHEAD REPRESENTS ONE COMPLETE CIRCUIT; "X" DENOTES PANEL NAME; NUMBER(S) DENOTES CIRCUIT(S).

DRAWING INDEX

FULLY SPRINKLERED

Revisions	Date

CONSULTANTS:

Heapy Engineering
Mechanical Electrical Commissioning Technology
Nationally Recognized Leader in Sustainability / LEED
1400 W Dorothy Lane, Dayton OH 45409-1310
Ph: 937-224-0861 Fax: 937-224-5777 www.heapy.com
HEAPY PROJECT No.:2012-04004 FIRM LICENSE No.:01528

STATE OF OHIO · JOHN A. BLACK · 49341 · REGISTERED PROFESSIONAL ENGINEER

ARCHITECT/ENGINEERS:

JOHN POE ARCHITECTS
116 EAST THIRD STREET
DAYTON, OHIO 45402-2130
937 461 3290 PHONE
937 461 0260 FAX
jpa@johnpoe.com

Drawing Title: SYMBOLS

Approved: Project Director

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Location: Cincinnati, Ohio

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Department of Veterans Affairs

SPECIFICATION GRADE CHAIN HUNG INDUSTRIAL, NOMINAL 14" X 4' IN SIZE AND APPROXIMATELY 6" DEEP.

HOUSING: CODE GAUGE STEEL HOUSING WITH LONGITUDINAL REINFORCING RIBS. SEPARATE NON-CAPTIVE STUD FOR FIXTURE GROUNDING. DESIGNED FOR INDIVIDUAL OR CONTINUOUS ROW MOUNTING. SPRING LOADED TURRET LAMP HOLDERS. WIRE GUARD.

REFLECTOR: DIE-EMBOSSED STEEL WITH TRANSVERSE RIBS FOR RIGIDITY. 10%-15% UPLIGHT APERTURES.

FINISH: MULTI-STAGE PHOSPHATE BONDING TREATMENT AND HIGH REFLECTANCE BAKE ENAMEL.

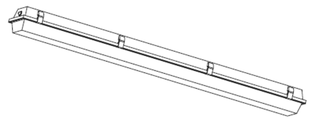
LAMPS: TWO RAPID START 32W-T8 LAMPS, MIN CRI OF 85, 4100K.

BALLAST: HPF ELECTRONIC PROGRAMMED RAPID START BALLAST, 0.88BF, 120/277V.

LOCATION: CHAIN MOUNT AT 7'-6" AFF UNLESS NOTED OTHERWISE.

FLUORESCENT INDUSTRIAL FIXTURE

E / C1



SPECIFICATION GRADE LOW PROFILE FLUORESCENT LIGHTING FIXTURE WITH ACRYLIC LENS, NOMINAL 4.25" DP x 7.25" WIDE x 52"L IN SIZE.

HOUSING: MOLDED FIBERGLASS HOUSING. SEPARATE NON-CAPTIVE STUD FOR FIXTURE GROUNDING. IP67 RATED

REFLECTOR: PAINTED WHITE INTERNAL METAL.

LAMPS: TWO RAPID START 32W-T8 LAMPS, MIN CRI OF 85, 4100K.

BALLAST: HPF ELECTRONIC PROGRAMMED RAPID START BALLAST, 0.88BF, 120/277V.

LOCATION: SURFACE MOUNT IN ELEVATOR SHAFT WITHOUT CONFLICTING WITH EQUIP.

FLUORESCENT VAPORTIGHT

E / C2

SPECIFICATION GRADE RECESSED FLUORESCENT LIGHTING TROFFER WITH FLAT LOW-BRIGHTNESS LENS PANEL, NOMINAL 2' X 4' IN SIZE AND APPROXIMATELY 4.25 INCHES DEEP.

HOUSING: DIE FORMED AND EMBOSSED CODE GAUGE STEEL. END CAPS HINGED AND SCREWED TO HOUSING FOR RIGIDITY. DESIGNED FOR INSTALLATION IN CEILING TYPE SHOWN ON ARCHITECTURAL DRAWINGS. INTEGRAL T-BAR CLIPS. HARDWARE FOR MINIMUM 4 POINTS OF SUPPORT. SEPARATE NON-CAPTIVE STUD FOR FIXTURE GROUNDING.

REFLECTOR: HIGH REFLECTANCE BAKED WHITE ENAMEL AND SPECULAR SILVER INSERT.

FINISH: MULTI-STAGE PHOSPHATE BONDING TREATMENT AND HIGH REFLECTANCE BAKED WHITE ENAMEL.

SHIELDING: 100% PRISMATIC VIRGIN ACRYLIC, PATTERN 12, .125" THICK (NOMINAL). FLUSH DOOR WITH MITRED CORNERS, INCONSPICUOUS CAM ACTION LATCHES.

LAMPS: RAPID START 32W-T8 LAMPS, MIN CRI OF 85, 4100K.

BALLAST: HPF ELECTRONIC PROGRAMMED RAPID START BALLAST, 0.88BF, 120/277V.

VARIATIONS:

EF2: TWO LAMP FIXTURE WITH ONE STANDARD BALLAST.

EF3: 2' x 2' FIXTURE WITH 2-17W T8 LAMPS.

RECESSED FLUORESCENT FIXTURE

E / Fx

HOUSING AND CANOPY: MARINE GRADE VINYL CLAD ALUMINUM.

DOOR FRAME: HINGED WITH ALUMINUM REINFORCED POLYCARBONATE SHIELD.

FINISH: WHITE

INSCRIPTION PANEL(S): RED L.E.D. 6" LETTERS

LAMPS: MULTIPLE L.E.D. LAMP ASSEMBLY WITH MINIMUM OF 20,000 HOURS LIFE.

VARIATIONS: TYPE EX2 DENOTE DOUBLE FACED FIXTURES. FURNISHED FIXTURES WITH DIRECTIONAL ARROWS WHERE SHOWN ON DRAWINGS AND WIRED FOR 120/277-VOLT OPERATION AS INDICATED.

LOCATION: CEILING MOUNT WHERE SHOWN. WALL MOUNT AT 7'-4" AFF WHERE SHOWN UNLESS OTHERWISE NOTED.

TOP MOUNTED EXIT LIGHT

E / X1

FULLY SPRINKLERED

Revisions	Date

CONSULTANTS:

Heapy Engineering
Mechanical Electrical Commissioning Technology
Nationally Recognized Leader in Sustainability / LEED
1400 W Dorothy Lane, Dayton OH 45409-1310
Ph: 937-224-0861 Fax: 937-224-5777 www.heapy.com
HEAPY PROJECT No.:2012-04004 FIRM LICENSE No.:01528

STATE OF OHIO · JOHN A. BLACK · 49341 · REGISTERED PROFESSIONAL ENGINEER

ARCHITECT/ENGINEERS:

JOHN POE ARCHITECTS
116 EAST THIRD STREET
DAYTON, OHIO 45402-2130
937 461 3290 PHONE
937 461 0290 FAX
jpa@johnpoe.com

Drawing Title: LIGHTING FIXTURE DESCRIPTIONS

Approved: Project Director

Project Title: Upgrade Elevators, Pneumatic Tubes and Dumbwaiter

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Date: 12/17/2012 | Checked: MSG | Drawn: NS

Project No.
VA Project No. 539-13-101
JPA Project No. 12008.00

Building Number

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		MOTOR											STARTER													DISCONNECT MEANS														CONTROL			FEEDER					
		CHARACTERISTICS								LOCATION			TYPE				LOCATION							TYPE					LOCATION																				
MARK	NAMEPLATE	HORSEPOWER (HP)	LOAD (kVA)	120V-1 PH	208V-1 PH	208V-3PH	240V-1 PH	240V-3PH	277V-1 PH	480V-1 PH	480V-3PH	ROOM NUMBER	ROOM NAME	NEMA SIZE	MANUAL	MAGNETIC	BUILT-IN MOTOR O/L	2-SPEED	VFD	SEE NOTE	NEAR MOTOR	MOTOR CONT CENTER	EQUIP CONT PANEL	ROOM NUMBER	SEE NOTE	FURNISHED BY	DISC SWITCH	MANUAL STARTER	RECEPTACLE	FEEDER SW OR BREAKER	NEMA TYPE	DISC SIZE	FUSE SIZE	NEAR MOTOR	MOTOR CONT CENTER	EQUIP CONT PANEL	PANELBOARD	SEE NOTE	FURNISHED BY	INTERLOCK WITH MOTOR NO. BY E.C.	MANUAL AT STARTER	INTEGRAL WITH EQUIPMENT	FURNISHED BY	SEE NOTE	NUMBER OF CONDUCTORS	WIRE SIZE	GROUND SIZE	CONDUIT SIZE	SEE NOTE
1-RTU1	PACKAGED ROOFTOP UNIT 1-RTU1	26MCA	17.293								•								•				•		DIV 23	•											DIV 26		•				③	6	10	0.75	
1-VRF1	FAN COIL 1-VRF1	5.6MCA	1.614			•						7	Space				•						•			DIV 23	•											DIV 26		•				3	12	12	0.75	
1-VRF2	FAN COIL 1-VRF2	5.6MCA	1.614			•						7	Space				•						•			DIV 23	•											DIV 26		•				3	12	12	0.75	
1-VRF3	FAN COIL 1-VRF3	5.6MCA	1.614			•						7	Space				•						•			DIV 23	•											DIV 26		•				3	12	12	0.75	
1-VRF4	FAN COIL 1-VRF4	1.2MCA	0.208	•								9	Space				•						•			DIV 23	•											DIV 26		•				2	12	12	0.75	
1-VRF5	FAN COIL 1-VRF5	1.2MCA	0.208	•								9	Space				•						•			DIV 23	•											DIV 26		•				2	12	12	0.75	
1-VRFHP1	HEAT PUMP 1-VRFHP (2 CONNECTIONS REQUIRED)	19MCA	12.637								•						•						•			DIV 23	•											DIV 26		•				③	8	10	0.75	
8-VRF1	FAN COIL 8-VRF1	25MCA	4.16	•													•						•			DIV 23	•											DIV 26		•				2	10	10	0.75	
ELEV8	BUILDING 8 ELEVATOR	25	28.821			•															•					ELEV	•							•				DIV 26		•			1	3	1	8	1.5	
ELEV16	BUILDING 16 ELEVATOR	20	25.219			•															•					ELEV	•							•				DIV 26		•			1	3	1	8	1.5	
P1	PASSENGER ELEVATOR P1	40.4	30.623			•						7	Space								•					ELEV	•							•				DIV 26		•			1	3	1/0	6	1.5	
P2	PASSENGER ELEVATOR P2	40.4	30.623			•						7	Space								•					ELEV	•							•				DIV 26		•			1	3	1/0	6	1.5	
P3	PASSENGER ELEVATOR P3	40.4	30.623			•						7	Space								•					ELEV	•							•				DIV 26		•			1	3	1/0	6	1.5	
P4	PASSENGER ELEVATOR P4	40.4	30.623			•						7	Space								•					ELEV	•							•				DIV 26		•			1	3	1/0	6	1.5	
P15	PASSENGER ELEVATOR P15	48.4	41.569								•										•					ELEV	•							•				DIV 26		•			1	3	1	8	1.5	
P16	PASSENGER ELEVATOR P16	48.4	41.569								•										•					ELEV	•							•				DIV 26		•			1	3	1	8	1.5	
S5	PASSENGER ELEVATOR S5	53.5	25.219			•						7	Space								•					ELEV	•							•				DIV 26		•			1	3	1/0	6	1.5	
S6	PASSENGER ELEVATOR S6	53.5	25.219			•						7	Space								•					ELEV	•							•				DIV 26		•			1	3	1/0	6	1.5	

NOTES:
1 ADJUST EXISTING SHUNT-TRIP BREAKER/DISCONNECT SETTINGS. COORDINATE NEW SETTINGS WITH ENGINEER DURING SHOP DRAWING REVIEW.

Panel: A-2

Location:
Supply From:
Voltage: 120/208 Wye-3PH-4W

Mounting: Surface
Enclosure: Type 1

A.I.C. Rating: 10,000
Mains Type: 60A M.L.O.
Mains Rating: 60 A

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	EXIST. RELOC.	20 A	1	1000	256 VA					1	20 A	ELEV SHAFT	2
3	EXIST. RELOC	20 A	1			1000	0 VA			1	20 A	Spare	4
5	EXIST. RELOC	20 A	1					1000	0 VA	1	20 A	Spare	6
7	Space	--	--	0 VA	0 VA					--	--	Space	8
9	Space	--	--			0 VA	2080			2	30 A	8-VRF1	10
11	Space	--	--					0 VA	2080	--	--	--	12
	Total Load:			1.26 kVA		3.08 kVA		3.08 kVA					

Notes:

TOTAL CONNECTED	ESTIMATED DEMAND
7.42 kVA	6.0 KVAD (16A)

FULLY SPRINKLERED

Revisions	Date

CONSULTANTS:

Heapy Engineering
Mechanical Electrical Commissioning Technology
Nationally Recognized Leader in Sustainability / LEED
1400 W Dorothy Lane, Dayton OH 45409-1310
Ph: 937-224-0861 Fax: 937-224-5777 www.heapy.com
HEAPY PROJECT No.:2012-04004 FIRM LICENSE No.:01528

STATE OF OHIO · JOHN A. BLACK · 49341 · REGISTERED PROFESSIONAL ENGINEER

ARCHITECT/ENGINEERS:

JOHN POE ARCHITECTS
116 EAST THIRD STREET
DAYTON, OHIO 45402-2130
937 461 3290 PHONE
937 461 0260 FAX
joa@johnpoe.com

Drawing Title: SCHEDULES

Approved: Project Director

Project Title: Upgrade Elevators, Pneumatic Tubes and Dumbwaiter

Location: Cincinnati, Ohio

Date: 12/17/2012 | Checked: MSG | Drawn: NS

Project No.
VA Project No. 539-13-101
JPA Project No. 12008.00

Building Number

Drawing Number: E003
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GENERAL NOTES

A (1) EACH BRANCH CIRCUIT HOMERUN SHALL HAVE NO MORE THAN THREE CIRCUITS. EACH BRANCH CIRCUIT SHALL HAVE A SEPERATE NEUTRAL AND GREEN INSULATED EQUIPMENT GROUNDING CONDUCTOR.

B MULTI-GANG BACKBOXES FOR DIFFERENT VOLTAGES AND TYPES OF EMERGENCY AND NORMAL BRANCH WIRING DEVICES SHALL HAVE DIVIDERS BETWEEN DEVICES.

C INCLUDE ALL WORK NECESSARY TO ACCOMMODATE PHASING. REFER TO ARCHITECTURAL DRAWINGS AND GENERAL REQUIREMENTS SECTION 01 00 00.

D REFER TO ARCHITECTURAL DRAWINGS FOR RATED WALL LOCATIONS.

E LABEL ALL WIRING DEVICES/JUNCTION BOXES WITH PANEL/CIRCUIT NUMBER.

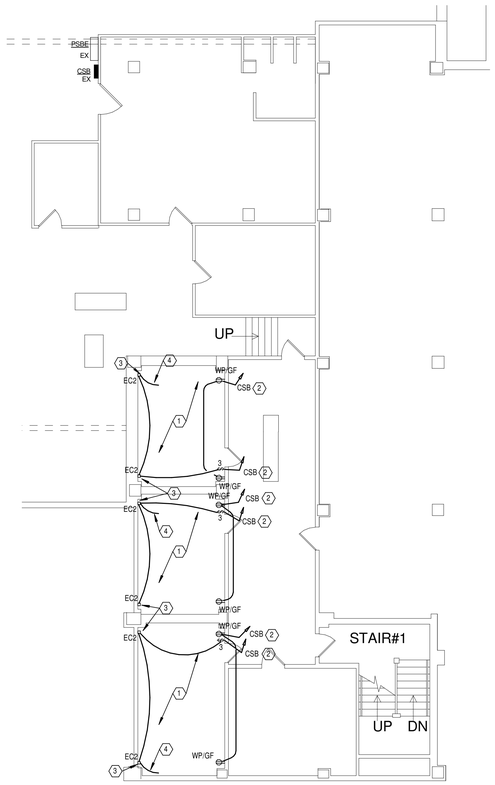
PLAN NOTES

1 REMOVE EXISTING LUMINAIRES AND RECEPTACLES SERVING THE ELEVATOR PIT. MAINTAIN EXISTING CIRCUIT CONTINUITY.

2 CIRCUIT TO SPARE 20A/1P BREAKER IN PANEL INDICATED. RUN 2-#12, 1-#12 GRD. IN 0.75" C.

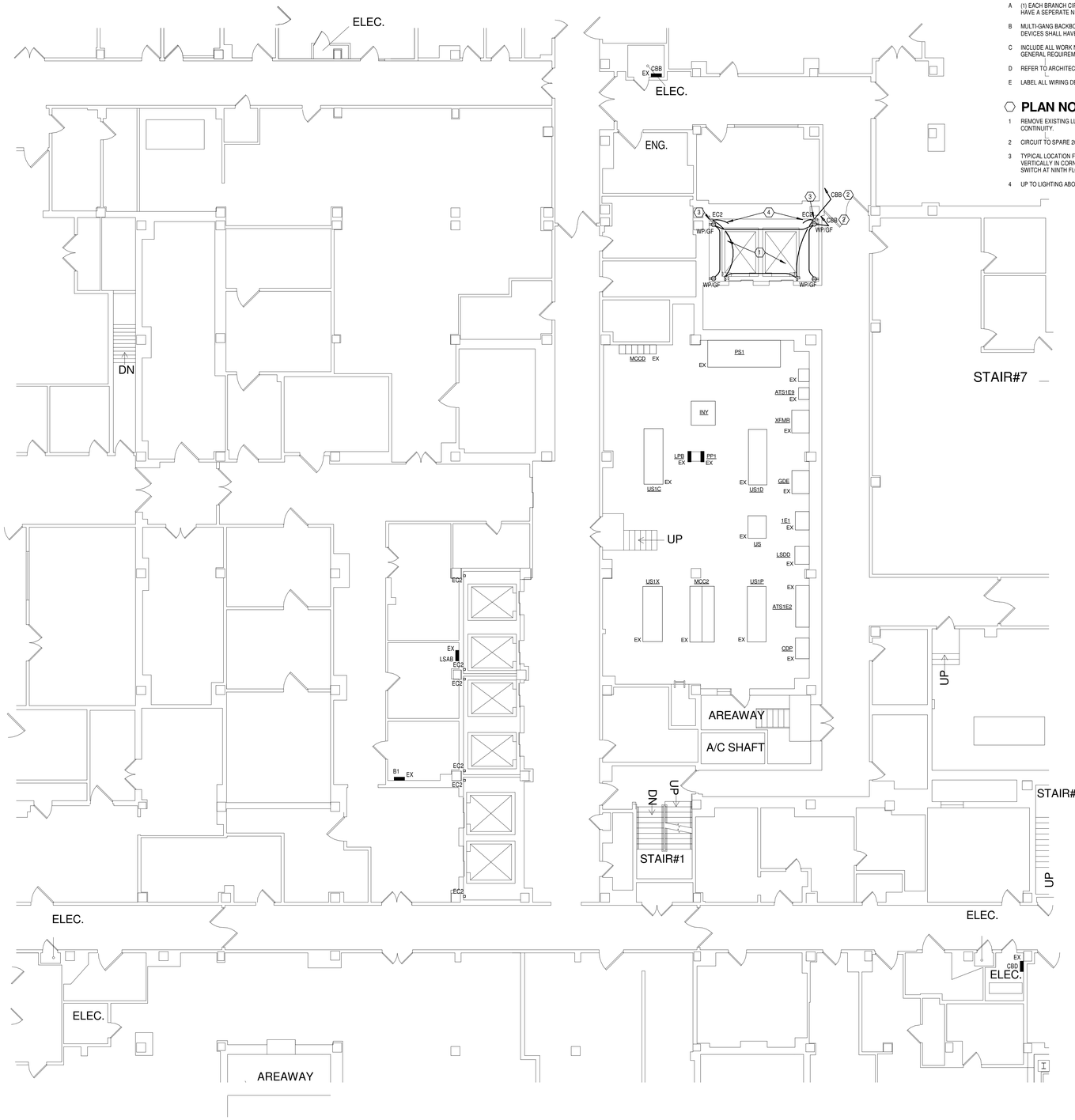
3 TYPICAL LOCATION FOR TYPE EC2 LUMINAIRE AT EACH LEVEL UP TO AND INCLUDING NINTH FLOOR. MOUNT VERTICALLY IN CORNER OF SHAFT. COORDINATE LOCATION WITH ELEVATOR EQUIPMENT. PROVIDE SECOND 3-WAY SWITCH AT NINTH FLOOR LEVEL FOR LIGHTING CONTROLS.

4 UP TO LIGHTING ABOVE, REFER TO NOTE #3.



N 2 PLAN — SUB-BASEMENT PARTIAL PLAN

Scale: 1/8" = 1'-0"



N 1 PLAN — BASEMENT PARTIAL PLAN

Scale: 1/8" = 1'-0"

FULLY SPRINKLERED

Revisions	Date

CONSULTANTS:

Heapy Engineering
Mechanical Electrical Commissioning Technology
Nationally Recognized Leader in Sustainability / LEED
1400 W Dorothy Lane, Dayton OH 45409-1310
Ph: 937-224-0861 Fax: 937-224-5777 www.heapy.com
HEAPY PROJECT No.:2012-04004 FIRM LICENSE No.:01528

STATE OF OHIO — JOHN A. BLACK 49341 — REGISTERED PROFESSIONAL ENGINEER

ARCHITECT/ENGINEERS:

JOHN POE ARCHITECTS
116 EAST THIRD STREET
DAYTON, OHIO 45402-2130
937 461 3290 PHONE
937 461 0260 FAX
jpa@johnpoe.com

Drawing Title: BASEMENT AND SUB-BASEMENT PARTIAL PLANS

Approved: Project Director

Project Title: Upgrade Elevators, Pneumatic Tubes and Dumbwaiter

Location: Cincinnati, Ohio

Date: 12/17/2012 | Checked: MSG | Drawn: NS

Project No.
VA Project No. 539-13-101
JPA Project No. 12008.00

Building Number: 1

Drawing Number: 1-EP101

Dwg. of

Office of Construction and Facilities Management
Department of Veterans Affairs

GENERAL NOTES

A (1) EACH BRANCH CIRCUIT HOMERUN SHALL HAVE NO MORE THAN THREE CIRCUITS. EACH BRANCH CIRCUIT SHALL HAVE A SEPERATE NEUTRAL AND GREEN INSULATED EQUIPMENT GROUNDING CONDUCTOR.

B MULTI-GANG BACKBOXES FOR DIFFERENT VOLTAGES AND TYPES OF EMERGENCY AND NORMAL BRANCH WIRING DEVICES SHALL HAVE DIVIDERS BETWEEN DEVICES.

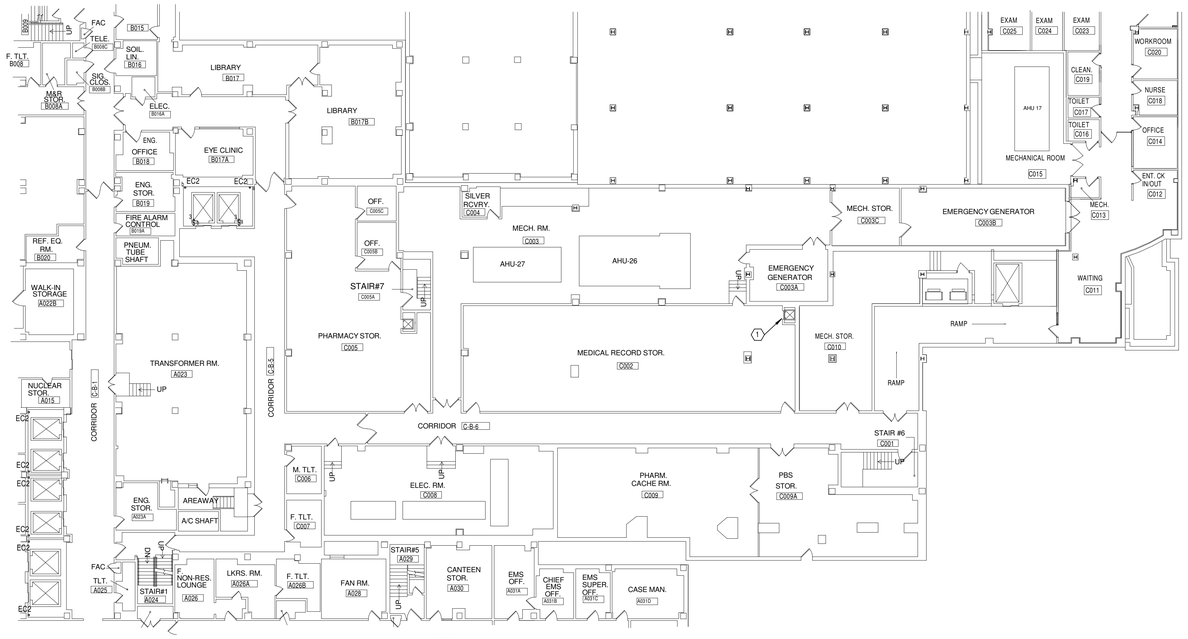
C INCLUDE ALL WORK NECESSARY TO ACCOMMODATE PHASING. REFER TO ARCHITECTURAL DRAWINGS AND GENERAL REQUIREMENTS SECTION 01 00 00.

D REFER TO ARCHITECTURAL DRAWINGS FOR RATED WALL LOCATIONS.

E LABEL ALL WIRING DEVICES/JUNCTION BOXES WITH PANEL/CIRCUIT NUMBER.

PLAN NOTES

1 DISCONNECT EXISTING DUMBWAITER. AND RECONNECT NEW DUMBWAITER. MAINTAIN EXISTING FEEDER, PROVIDE DISCONNECTS AS REQUIRED.



PARTIAL BASEMENT PLAN

Scale: 1/16" = 1'-0"

FULLY SPRINKLERED

Revisions	Date

CONSULTANTS:

Heapy Engineering
Mechanical Electrical Commissioning Technology
Nationally Recognized Leader in Sustainability / LEED
1400 W Dorothy Lane, Dayton OH 45409-1310
Ph: 937-224-0861 Fax: 937-224-5777 www.heapy.com
HEAPY PROJECT No.:2012-04004 FIRM LICENSE No.:01528

STATE OF OHIO · JOHN A. BLACK · 49341 · REGISTERED PROFESSIONAL ENGINEER

ARCHITECT/ENGINEERS:

JOHN POE ARCHITECTS
116 EAST THIRD STREET
DAYTON, OHIO 45402-2130
937 461 3290 PHONE
937 461 0260 FAX
jpa@johnpoe.com

Drawing Title: BASEMENT PARTIAL PLAN

Approved: Project Director

Project Title: Upgrade Elevators, Pneumatic Tubes and Dumbwaiter

Location: Cincinnati, Ohio

Date: 12/17/2012 | Checked: MSG | Drawn: NS

Project No.
VA Project No. 539-13-101
JPA Project No. 12008.00

Building Number: 1

Drawing Number: 1-EP102

Dwg. of

Office of Construction and Facilities Management
Department of Veterans Affairs

GENERAL NOTES

A (1) EACH BRANCH CIRCUIT HOMERUN SHALL HAVE NO MORE THAN THREE CIRCUITS. EACH BRANCH CIRCUIT SHALL HAVE A SEPERATE NEUTRAL AND GREEN INSULATED EQUIPMENT GROUNDING CONDUCTOR.

B MULTI-GANG BACKBOXES FOR DIFFERENT VOLTAGES AND TYPES OF EMERGENCY AND NORMAL BRANCH WIRING DEVICES SHALL HAVE DIVIDERS BETWEEN DEVICES.

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E LABEL ALL WIRING DEVICES/JUNCTION BOXES WITH PANEL/CIRCUIT NUMBER.

PLAN NOTES

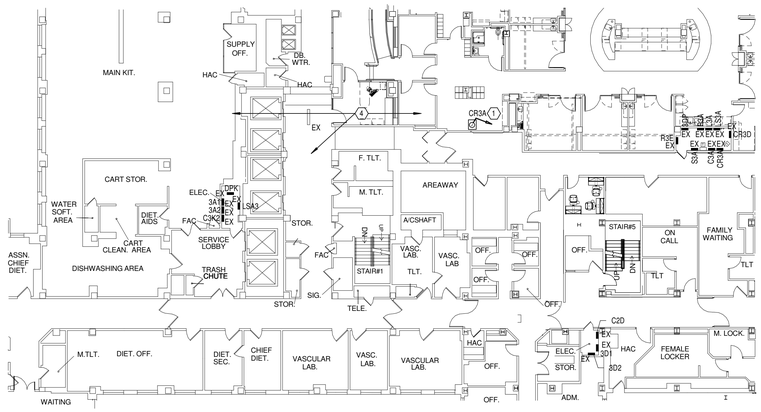
1 CIRCUIT PNEUMATIC TUBE DIVERTER TO PANEL INDICATED. PROVIDE 2-#12 & 1-#12 GRD. IN 0.75" C. UTILIZE EXISTING SPARE 20A/1P BREAKER

2 CIRCUIT PNEUMATIC TUBE STATION TO PANEL INDICATED. PROVIDE 2-#12 & 1-#12 GRD. IN 0.75" C. PROVIDE NEW 20A/1P BREAKER.

3 REMOVE EXISTING LIGHT SWITCHES AND RECEPTACLE AS REQUIRED BY NEW TUBE STATION. MAINTAIN EXISTING CIRCUITS AND EXTEND TO NEW SWITCHES AND RECEPTACLE. COORDINATE EXACT LOCATION WITH NEW TUBE STATION LOCATION.

4 INCLUDE 200' OF 6-#12, 3-#12 GRD. IN 0.75" C. FOR REROUTING BRANCH CIRCUITRY TO ACCOMODATE NEW PNEUMATIC TUBE CONDUITS/EQUIPMENT.

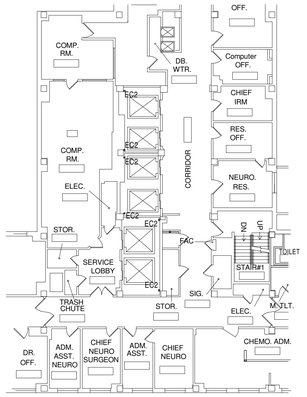
5 REMOVE EXISTING LUMINAIRE AND CONTROLS IN THIS AREA. CONNECT NEW LUMINAIRE AND WALL-MOUNTED OCCUPANCY SENSOR TO EXISTING LIGHTING CIRCUIT.



N PLAN

4 PARTIAL THIRD FLOOR PLAN

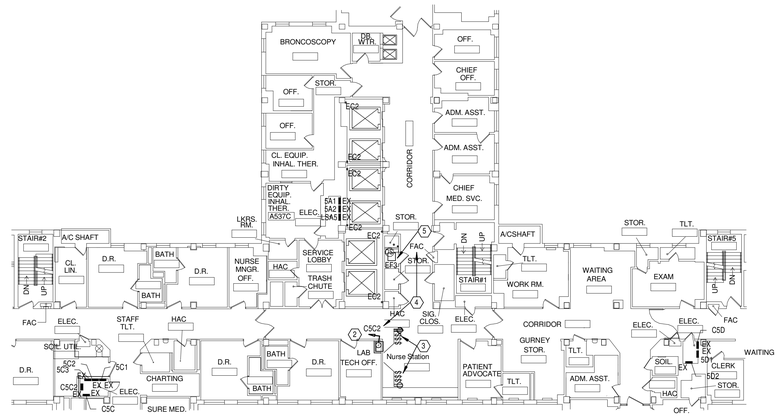
Scale: 1/16" = 1'-0"



N PLAN

2 PARTIAL FOURTH FLOOR PLAN

Scale: 1/16" = 1'-0"



N PLAN

3 PARTIAL FIFTH FLOOR PLAN

Scale: 1/16" = 1'-0"

FULLY SPRINKLERED

Revisions	Date

CONSULTANTS:

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Mechanical Electrical Commissioning Technology
Nationally Recognized Leader in Sustainability / LEED
1400 W Dorothy Lane, Dayton OH 45409-1310
Ph: 937-224-0861 Fax: 937-224-5777 www.heapy.com
HEAPY PROJECT No.:2012-04004 FIRM LICENSE No.:01528

STATE OF OHIO · JOHN A. BLACK · 49341 · REGISTERED PROFESSIONAL ENGINEER

ARCHITECT/ENGINEERS:

JOHN POE ARCHITECTS
116 EAST THIRD STREET
DAYTON, OHIO 45402-2130
937 461 3290 PHONE
937 461 0260 FAX
joa@johnpoe.com

Drawing Title: THIRD FOURTH AND FIFTH FLOOR PARTIAL PLANS

Approved: Project Director

Project Title: Upgrade Elevators, Pneumatic Tubes and Dumbwaiter

Location: Cincinnati, Ohio

Date: 12/17/2012 | Checked: MSG | Drawn: NS

Project No.
VA Project No. 539-13-101
JPA Project No. 12008.00

Building Number: 1

Drawing Number: 1-EP103

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Department of Veterans Affairs

GENERAL NOTES

A (1) EACH BRANCH CIRCUIT HOMERUN SHALL HAVE NO MORE THAN THREE CIRCUITS. EACH BRANCH CIRCUIT SHALL HAVE A SEPERATE NEUTRAL AND GREEN INSULATED EQUIPMENT GROUNDING CONDUCTOR.

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D REFER TO ARCHITECTURAL DRAWINGS FOR RATED WALL LOCATIONS.

E LABEL ALL WIRING DEVICES/JUNCTION BOXES WITH PANEL/CIRCUIT NUMBER.

⬡ PLAN NOTES

1 CIRCUIT PNEUMATIC TUBE DIVERTER TO PANEL INDICATED. PROVIDE 2-#12 & 1-#12 GRD. IN 0.75" C. UTILIZE EXISTING 20A/1P BREAKER.

2 CIRCUIT PNEUMATIC TUBE STATION TO PANEL INDICATED. PROVIDE 2-#12 & 1-#12 GRD. IN 0.75" C. UTILIZE EXISTING 20A/1P BREAKER.

3 CIRCUIT PNEUMATIC TUBE STATION TO PANEL INDICATED. PROVIDE 2-#12 & 1-#12 GRD. IN 0.75" C. PROVIDE NEW 20A/1P BREAKER.

4 REMOVE EXISTING RECEPTACLE. MAINTAIN EXISTING CIRCUIT CONTINUITY.

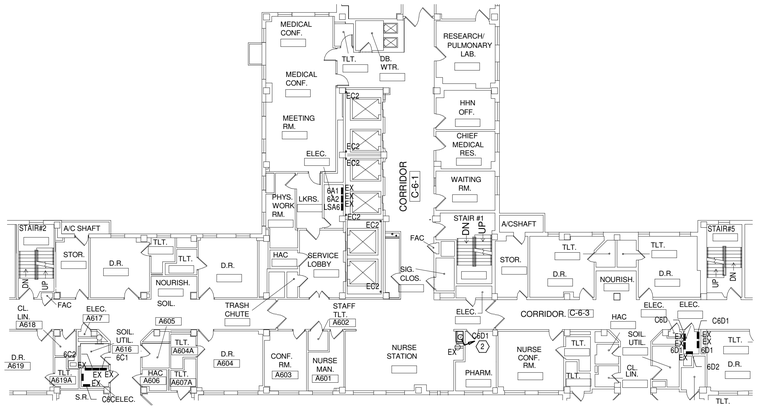
5 INCLUDE 200' OF 6-#12, 3-#12 GRD. IN 0.75" C. FOR REROUTING BRANCH CIRCUITRY TO ACCOMODATE NEW PNEUMATIC TUBE CONDUITS/EQUIPMENT.

6 INCLUDE 400' OF 6-#12, 3-#12 GRD. IN 0.75" C. FOR REROUTING BRANCH CIRCUITRY TO ACCOMODATE NEW PNEUMATIC TUBE CONDUITS/EQUIPMENT.

7 REMOVE EXISTING LUMINAIRE AND CONTROL IN THIS AREA. CONNECT NEW LUMINAIRE TO EXISTING LIGHTING CIRCUIT.

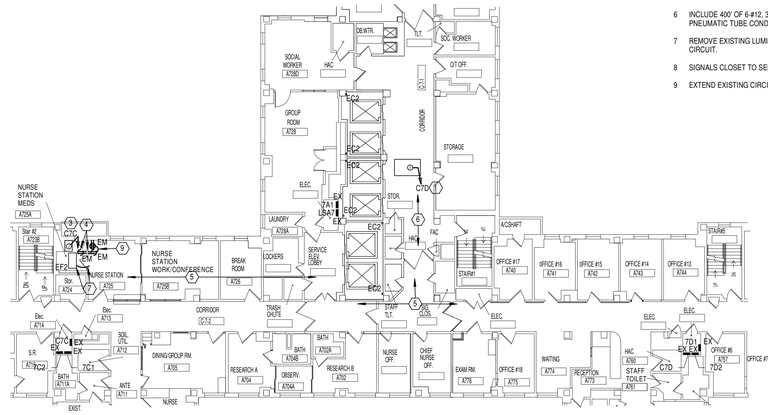
8 SIGNALS CLOSET TO SERVE NEW 10TH FLOOR DATA OUTLET.

9 EXTEND EXISTING CIRCUIT TO SERVE NEW DEVICE AS SHOWN.



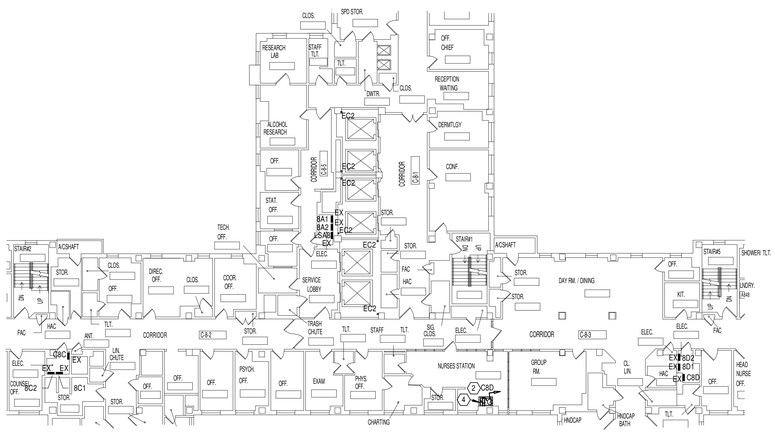
N PLAN 2 PARTIAL SIXTH FLOOR PLAN

Scale: 1/16" = 1'-0"



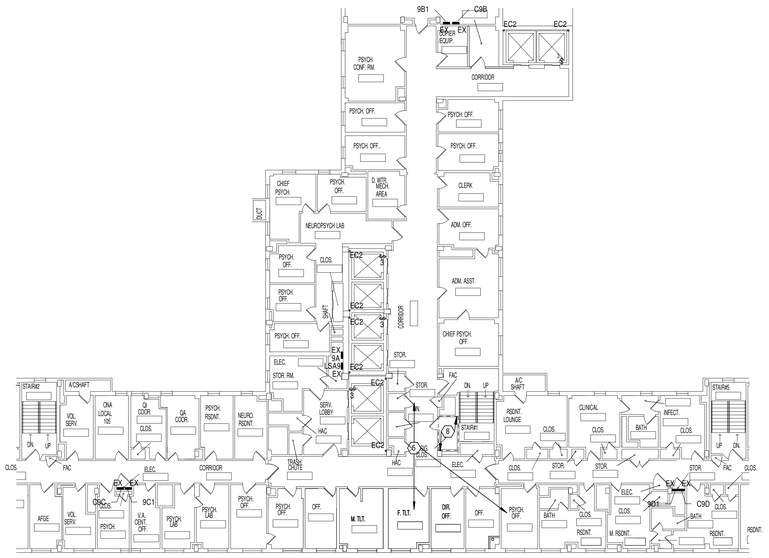
N PLAN 3 PARTIAL SEVENTH FLOOR PLAN

Scale: 1/16" = 1'-0"



N PLAN 5 PARTIAL EIGHTH FLOOR PLAN

Scale: 1/16" = 1'-0"



N PLAN 4 PARTIAL NINTH FLOOR PLAN

Scale: 1/16" = 1'-0"

FULLY SPRINKLERED

Revisions	Date

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Nationally Recognized Leader in Sustainability / LEED
1400 W Dorothy Lane, Dayton OH 45409-1310
Ph: 937-224-0861 Fax: 937-224-5777 www.heapy.com
HEAPY PROJECT No.:2012-04004 FIRM LICENSE No.:01528

STATE OF OHIO · JOHN A. BLACK 49341 · REGISTERED PROFESSIONAL ENGINEER

ARCHITECT/ENGINEERS:

JOHN POE ARCHITECTS
116 EAST THIRD STREET
DAYTON, OHIO 45402-2130
937 461 3290 PHONE
937 461 0260 FAX
jpa@johnpoe.com

Drawing Title: SIXTH SEVENTH EIGHTH AND NINTH FLOOR PARTIAL PLANS

Approved: Project Director

Project Title: Upgrade Elevators, Pneumatic Tubes and Dumbwaiter

Location: Cincinnati, Ohio

Date: 12/17/2012 | Checked: MSG | Drawn: NS

Project No. VA Project No. 539-13-101 JPA Project No. 12008.00

Building Number: 1

Drawing Number: 1-EP104

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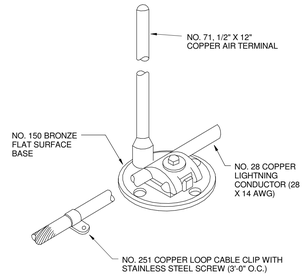
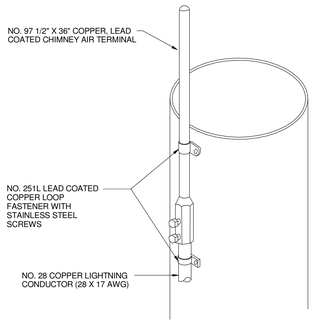
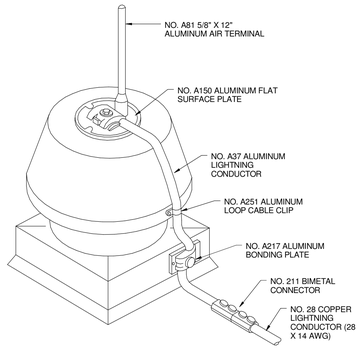
Department of Veterans Affairs



A LIGHTNING PROTECTION AIR TERMINAL DETAIL
NTS

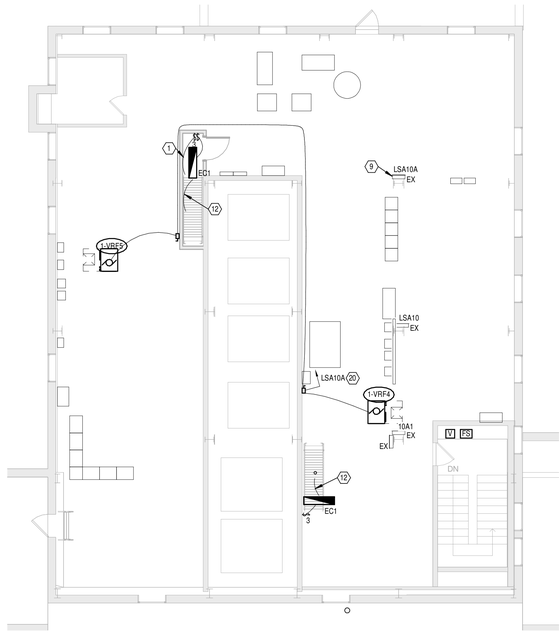


B LIGHTNING PROTECTION AIR TERMINAL DETAIL
NTS



C LIGHTNING PROTECTION AIR TERMINAL DETAIL
NTS

1 LIGHTNING PROTECTION DETAILS
SCALE: NONE



N PLAN 3 TENTH FLOOR PARTIAL PLAN-NEW WORK
Scale: 1/8" = 1'-0"

GENERAL NOTES

A (1) EACH BRANCH CIRCUIT HOMERUN SHALL HAVE NO MORE THAN THREE CIRCUITS. EACH BRANCH CIRCUIT SHALL HAVE A SEPERATE NEUTRAL AND GREEN INSULATED EQUIPMENT GROUNDING CONDUCTOR.

B MULTI-GANG BACKBOXES FOR DIFFERENT VOLTAGES AND TYPES OF EMERGENCY AND NORMAL BRANCH WIRING DEVICES SHALL HAVE DIVIDERS BETWEEN DEVICES.

C INCLUDE ALL WORK NECESSARY TO ACCOMMODATE PHASING. REFER TO ARCHITECTURAL DRAWINGS AND GENERAL REQUIREMENTS SECTION 01 00 00.

D REFER TO ARCHITECTURAL DRAWINGS FOR RATED WALL LOCATIONS.

E LABEL ALL WIRING DEVICES/JUNCTION BOXES WITH PANEL/CIRCUIT NUMBER.

F LIGHTNING PROTECTION SYSTEM SHOWN FOR REFERENCE ONLY. SYSTEM SHALL BE DESIGNED AND INSTALLED PER NFPA 780 AND SPECIFICATIONS.

PLAN NOTES

1 PROVIDE NEW 3-WAY SWITCHING FOR ALL LIGHTING ON THE ELEVENTH FLOOR.

2 CONNECT TO EXISTING EMERGENCY CIRCUIT SERVING EXIT SIGNAGE IN THIS AREA.

3 DISCONNECT AND REMOVE EXISTING CIRCUITS TO ROOFTOP UNITS BACK TO SPLICE BOX.

4 UTILIZE EXISTING CIRCUITS PREVIOUSLY SERVING ROOFTOP UNITS REMOVED UNDER DEMOLITION TO SERVE NEW UNITS. INTERCEPT AT EXISTING SPLICE BOXES AS SHOWN AND EXTEND TO NEW LOCATION. SERVED FROM "MCCB" BELOW.

5 EXISTING ELEVATOR MOTOR/CONTROLLER TO BE REMOVED. DISCONNECT AND REMOVE FEEDER BACK TO LOCAL SHUNT-TRIP DISCONNECT/BREAKER. MAINTAIN EXISTING DISCONNECT/BREAKER AND HOMERUN FEEDER FOR RECONNECTION TO NEW ELEVATOR CONTROLLER.

6 PROVIDE 480V-30A/3P WP DISCONNECT FUSED AT 30A.

7 MAINTAIN EXISTING ELEVATOR SHUNT-TRIP BREAKER/DISCONNECT AND ELEVATOR CAB LIGHTING DISCONNECTS. UTILIZE EXISTING DISCONNECTS AND FEEDERS TO SERVE NEW ELEVATOR CONTROLLER.

8 NEW ELEVATOR CONTROLLER. PROVIDE NEW CONDUIT AND WIRE FROM EXISTING OR RELOCATED DISCONNECT/BREAKER TO CONTROLLER, AND FROM CONTROLLER TO ELEVATOR AS SHOWN. RECONNECT ALL REQUIRED INTERCONNECTIONS TO FIRE ALARM SYSTEM.

9 PANEL PROVIDED UNDER SEPERATE CONTRACT.

10 CONNECT TO LOCAL RECEPTACLE CIRCUIT.

11 DOWN TO EC1 LUMINAIRE BELOW.

12 UP TO EC1 LUMINAIRE ABOVE.

13 UTILIZE EXISTING SHUNT TRIP DISCONNECT/BREAKER AND FEEDER TO SERVE NEW ELEVATOR CONTROLLER.

14 REMOVE LIGHTNING PROTECTION SYSTEM TO ACCOMMODATE ROOF REPLACEMENT.

15 ELEVATOR CONTROLLER BY ELEVATOR EQUIPMENT SUPPLIER. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH SUPPLIER. PROVIDE NEW CONDUIT AND WIRE FROM EXISTING DISCONNECT/BREAKER TO CONTROLLER, AND FROM CONTROLLER TO ELEVATOR AS SHOWN. RECONNECT ALL REQUIRED INTERCONNECTIONS TO FIRE ALARM SYSTEM.

16 EXISTING CAB LIGHTING DISCONNECT TO BE RECIRCUITED FROM EXISTING PANEL INDICATED. CONNECT TO SPARE 20A/1P BREAKER IN EXISTING PANEL. PROVIDE NEW WIRING AND CONDUIT FROM DISCONNECT TO ELEVATOR CONTROLLER AS SHOWN. 2-#12 & 1-#12 GRD. IN 0.75" C.

17 NEW LIGHTNING PROTECTION CONDUCTOR.

18 NEW LIGHTNING PROTECTION AIR TERMINAL.

19 CONNECT TO EXISTING LIGHTNING PROTECTION SYSTEM.

20 UTILIZE SPARE 208V-15A/2P CIRCUIT BREAKER IN PANEL PROVIDED UNDER SEPERATE CONTRACT.

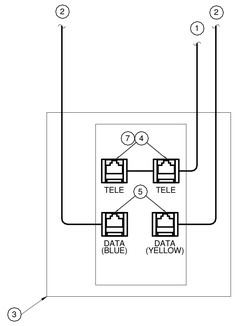
21 UTILIZE SPARE 208V-15A/3P CIRCUIT BREAKER IN PANEL PROVIDED UNDER SEPERATE CONTRACT.

22 UTILIZE SPARE 120V-20A/1P CIRCUIT BREAKER IN PANEL PROVIDED UNDER SEPERATE CONTRACT.

23 EXISTING SHUNT-TRIP DISCONNECT/BREAKER TO BE RELOCATED AS SHOWN TO ACCOMMODATE NEW WALL CONSTRUCTION. MAINTAIN EXISTING FEEDER, EXTEND AS REQUIRED. MATCH EXISTING FEEDER WIRE AND CONDUIT SIZING AND CHARACTERISTICS.

24 PROVIDE 250V-30A/2P FUSIBLE DISCONNECT SWITCH (FUSED AT 20 AMPS) FOR ELEVATOR CAB LIGHTS. RUN 2-#12, 1-#12 GRD. IN 0.75" C. FROM NEW CONTROLLER TO PANEL LSA10A AND UTILIZE EXISTING 20A/1P BREAKER INDICATED FOR EACH ELEVATOR CAB. CIRCUITS INDICATED ARE PRESENTLY SERVING ELEVATOR CAB LIGHTING.

25 PROVIDE 120V-20A CIRCUIT AND DATA CONNECTION TO DDC PANEL. RUN VOICE/DATA CABLE TO NINTH FLOOR SIGNALS CLOSET IN 0.75" C.



DETAIL NOTES

1 RUN TO LOCAL VOICE STATION CABLE TERMINATION EQUIPMENT.

2 RUN TO LOCAL DATA STATION CABLE TERMINATION EQUIPMENT.

3 4" SQ., 3.5" DEEP BOX WITH 2-GANG WITH 1-GANG MODULAR 4-PORT FACEPLATE.

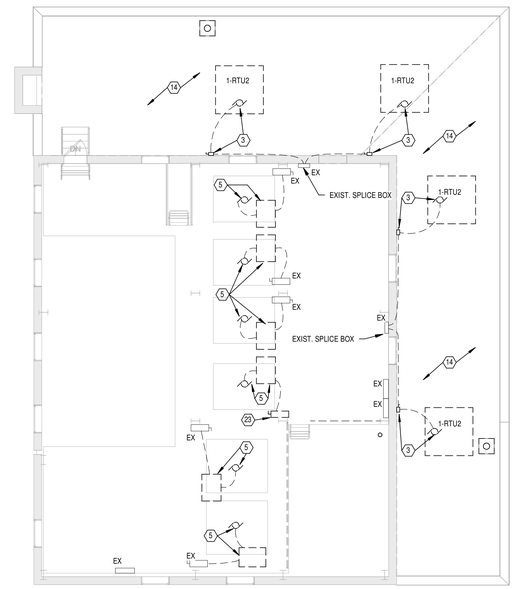
4 UTP VOICE JACK.

5 UTP DATA JACK.

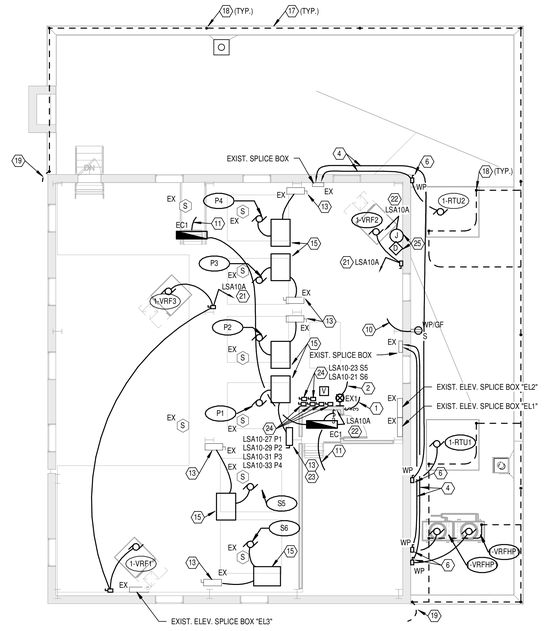
6 DEFAULT OUTLET IS 2 DATA JACKS AND 2 VOICE JACK. (2D/2V) PROVIDE ALTERNATE CONFIGURATION WHERE INDICATED ON THE DRAWINGS.

7 SPLIT PAIRS BETWEEN JACKS.

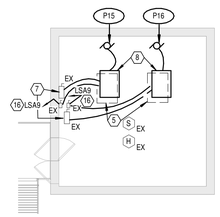
D 6 TECHNOLOGY DETAILS
SCALE: NONE



N PLAN 2 ELEVENTH FLOOR PARTIAL PLAN-DEMOLITION
Scale: 1/8" = 1'-0"



N PLAN 4 ELEVENTH FLOOR PARTIAL PLAN-NEW WORK
Scale: 1/8" = 1'-0"



N PLAN 5 ELEVENTH FLOOR PARTIAL PLAN
Scale: 1/8" = 1'-0"

FULLY SPRINKLERED

Revisions	Date

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Nationally Recognized Leader in Sustainability / LEED
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Ph: 937-224-0861 Fax: 937-224-5777 www.heapy.com
HEAPY PROJECT No.:2012-04004 FIRM LICENSE No.:01528

STATE OF OHIO · JOHN A. BLACK · 49341 · REGISTERED PROFESSIONAL ENGINEER

ARCHITECT/ENGINEERS:

JOHN POE ARCHITECTS
116 EAST THIRD STREET
DAYTON, OHIO 45402-2130
937 461 3290 PHONE
937 461 0260 FAX
jpa@johnpoe.com

Drawing Title: TENTH AND ELEVENTH FLOOR PARTIAL PLANS

Approved: Project Director

Project Title: Upgrade Elevators, Pneumatic Tubes and Dumbwaiter

Location: Cincinnati, Ohio

Date: 12/17/2012 | Checked: MSG | Drawn: NS

Project No.
VA Project No. 539-13-101
JPA Project No. 12008.00

Building Number: 1

Drawing Number: 1-EP105

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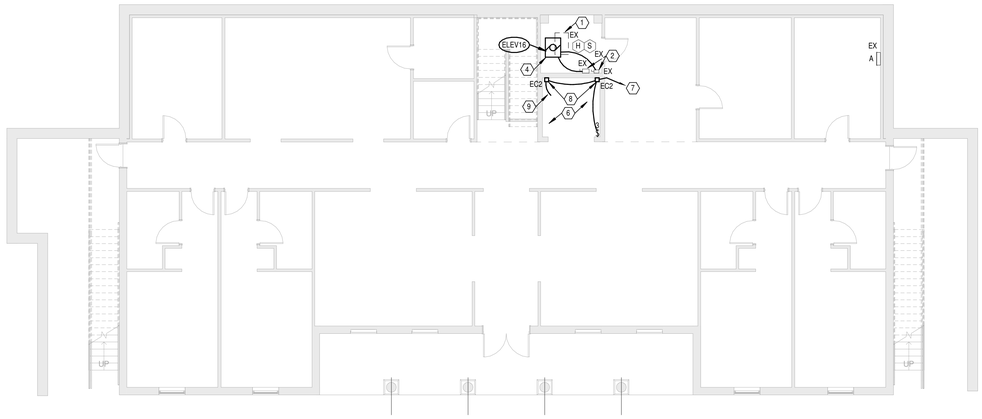
Office of Construction and Facilities Management
Department of Veterans Affairs



2 3 4 5

N 1 PLAN

(FISHER HOUSE)
BUILDING 16 FIRST FLOOR PLAN
Scale: 1/8" = 1'-0"

GENERAL NOTES

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D REFER TO ARCHITECTURAL DRAWINGS FOR RATED WALL LOCATIONS.

E LABEL ALL WIRING DEVICES/JUNCTION BOXES WITH PANEL/CIRCUIT NUMBER.

PLAN NOTES

1 EXISTING ELEVATOR PUMP/CONTROLLER TO BE REMOVED. DISCONNECT AND REMOVE FEEDER BACK TO LOCAL SHUNT-TRIP DISCONNECT/BREAKER. MAINTAIN EXISTING DISCONNECT/BREAKER AND HOMERUN FEEDER FOR RECONNECTION TO NEW ELEVATOR CONTROLLER.

2 MAINTAIN EXISTING ELEVATOR SHUNT-TRIP BREAKER/DISCONNECT AND ELEVATOR CAB LIGHTING DISCONNECTS. UTILIZE EXISTING DISCONNECTS AND FEEDERS TO SERVE NEW ELEVATOR CONTROLLER.

3 RUN 6-#12, 1-#12 GRD. IN 0.75" C. FROM INDOOR UNIT TO OUTDOOR UNIT. COORDINATE EXACT REQUIREMENTS WITH MANUFACTURER AND EQUIPMENT SUPPLIER.

4 NEW ELEVATOR PUMP/CONTROLLER, PROVIDE NEW CONDUIT AND WIRE FROM EXISTING DISCONNECT/BREAKER TO CONTROLLER, AND FROM CONTROLLER TO PUMP. RECONNECT ALL REQUIRED INTERCONNECTIONS TO FIRE ALARM SYSTEM.

5 PROVIDE NEW 208V-40A/3P BREAKER IN EXISTING PANEL "A" TO SERVE NEW SUB-PANEL "A-2". RELOCATE 3 EXISTING CIRCUITS FROM PANEL "A" TO SUB-PANEL TO ALLOW INSTALLATION OF BREAKER. RUN 4-#8 & 1-#10 GRD. IN 0.75" C. FROM BREAKER TO SUB-PANEL.

6 REMOVE EXISTING LUMINAIRES SERVING THE ELEVATOR PIT. MAINTAIN EXISTING CIRCUIT CONTINUITY.

7 CONNECT TO EXISTING LIGHTING CIRCUIT SERVING ELEVATOR SHAFT LIGHTING. RUN 2-#12, 1-#12 GRD. IN 0.75" C.

8 TYPICAL LOCATION FOR TYPE EC2 LUMINAIRE AT EACH LEVEL UP TO AND INCLUDING TOP FLOOR. MOUNT VERTICALLY IN CORNER OF SHAFT, COORDINATE LOCATION WITH ELEVATOR EQUIPMENT. PROVIDE SECOND 3-WAY SWITCH AT TOP FLOOR LEVEL FOR LIGHTING CONTROLS.

9 UP TO LIGHTING ABOVE, REFER TO NOTE #8.

N 3 PLAN

BUILDING 8 PARTIAL FIRST FLOOR PLAN
Scale: 1/8" = 1'-0"

N 2 PLAN

BUILDING 8 FOURTH FLOOR PLAN
Scale: 1/8" = 1'-0"

Revisions	Date

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STATE OF OHIO — JOHN A. BLACK 49341 — REGISTERED PROFESSIONAL ENGINEER

ARCHITECT/ENGINEERS:

JOHN POE ARCHITECTS
116 EAST THIRD STREET
DAYTON, OHIO 45402-2130
937 461 3290 PHONE
937 461 0260 FAX
jpa@johnpoe.com

Drawing Title: BUILDING 8 AND 16 FLOOR PLANS

Approved: Project Director

Project Title: Upgrade Elevators, Pneumatic Tubes and Dumbwaiter

Location: Cincinnati, Ohio

Date: 12/17/2012 | Checked: MSG | Drawn: NS

Project No. VA Project No. 539-13-101 JPA Project No. 12008.00

Building Number: 8 & 16

Drawing Number: EP101

Dwg. of

Office of Construction and Facilities Management
Department of Veterans Affairs